

**AN EVALUATION
OF THE MATHEMATICS AND SCIENCE
PARTNERSHIP GRANT
TO HAMPTON, S.C.
SCHOOL DISTRICTS ONE AND TWO
The Teachers Equipped to Advance Math and
Science (TEAMS) Program**

**George W. Appenzeller, MSW
Malia Howell
Sarah Meadows, MSW
Tiffany Powell**

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Terri Stanfield
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Dawn Smith
Mysti Long
Anthrow Roberts
Chitra Mahajani
Diane Stanley
Jacqueline Smith
Mamie Jenkins
Saidell Moore
Sarah Williams
Terry Wright
Tracy Preston

EXECUTIVE SUMMARY

Hampton County (SC) School Districts One (HD1) and Two (HD2) joined together to apply for a Math and Science Partnership (MSP) grant to fund Teachers Equipped to Advance Math and Science (TEAMS). The proposal was successful and the grant was received from the SC Department of Education beginning in September 2013. This grant follows up on a successful three year MSP grant District One conducted during the period of October 1, 2010 to September 30, 2013. This evaluation covers the first year of the new grant.

Hampton School District 1 is the lead district for the project. The vision is to create highly effective teachers by developing their knowledge of current content standards and by replacing traditional methods with engaging strategies that involve inquiry and practices which promote higher-level thinking, open-ended problem solving, and relevant project-based learning (PBL). Master Teachers (MTs) provide classroom coaching support regarding practices which foster conceptual learning of content while whole school Vertical Teams, Grade Level Teams, and Common Core State Standards School (CCSS) Implementation Teams (SITs) provide content-focused support. Professional Development (PD) in content mastery, best practices, and the use of technology from Institutes of Higher Education (IHE's), Homecourt Publishers, S²TEM Centers, and Invent Now, Inc., among others, is provided to make elementary, middle, and high school classroom teachers more effective.

The purpose of the current evaluation is to provide information that will assist the project staff in meeting the goals of Project TEAMS and in assuring the continuing improvement of the project. Both the process of implementation and the outcomes of the program are reported on in the evaluation. The process evaluation assesses the implementation of TEAMS's constituent tasks and subtasks, based on the grant's narrative and ten process objectives. The outcome evaluation is based on the outcome objective, Objective 7. The design is quasi-experimental. The experimental group consists of four subgroups: HD1 MTs and math/science teachers and HD2 MTs and math/ science teachers. The comparison group is composed of similar teachers from Bamberg School District 1. In addition, the evaluation measures the success at meeting the Government Performance and Result Act (GPRA) measures established by the federal government for MSP grants.

Of the 118 teachers who participated in the project during the 2013-2014 school year. Of these, 89 were HD1 teachers and 29 were HD2 teachers. Of those from HD1, 30 (33.7%) teach students in grades kindergarten through second (primary), 29 (32.6%) teach students in grades third through fifth (elementary), ten (11.2%) teach students in grades sixth through eighth (middle), and 20 (22.5%) teach students in grades ninth through twelfth (high). Of the 29 from HD2, 16 (55.2%) teach students in grades kindergarten through fifth (elementary), six (20.7%) teach in middle school, and seven (24.1%) teach in high school. In 2013-2014, there were approximately 2,453 students enrolled in seven schools in HD1. About half of the students in the district (55%) are African American, 43% are Caucasian, and 2% are of other races. The majority of the youth receive free (65%) or reduced (10%) meals. In 2013-2014, there were 873 students enrolled in three schools in HD2. Almost all of the students in the district (94%) are

African American, 2% are Caucasian, and 4% are of other races. The majority of the youth receive free (85%) or reduced (5%) meals.

All of the activities/subactivities planned for the grant were conducted, often beyond what was required. It is of special note that there was 100% success in providing planned professional development. There were 279 events attended by 119 staff for a total of 10,838 hours. There were 103 action plans completed with one goal for content growth and one goal for use of research-based best practices. All of the teams envisioned in the proposal (vertical teams, Grade Level Teams, and CCSS School Implementation Teams) were established and active. All of the process objectives were met or exceeded, with the exception of one which could not at present be measured and one which was partially met.

The master teachers are universally admired by other teachers for the work they are doing. It is also apparent that the district and school level staff, as well as the teachers, are taking the project very seriously and changing the culture of the two districts to one of a learning community.

During this first year, baseline for outcomes was established. This is especially important for HD2, in that it has not been exposed to TEAMS in the past. Some comparison to the past can be made for HD1, however. A comparison of HD1's current grade level achievement to grade level achievement in 2009-2010 (the year prior to the district's first MSP grant) shows that grade level achievement has improved by 6.6 points for third graders, 2.2 points for fourth graders, 9.2 points for fifth graders, 6.3 points for sixth graders, and 7.4 points for eighth graders. Grade level achievement for seventh graders has declined by 2.7 points.

Analyzing changes over time on outcomes between HD1, HD2 and the comparison school district of Bamberg 1 will be complicated by the demographic and student achievement differences between HD2 and HD1 and Bamberg 1. HD1 and Bamberg 1 are similar, but HD2 is not similar to either of the other two districts. This issue will need to be addressed before the next evaluation cycle is completed.

The project appears to have had a major impact on teacher practices. Teachers in HD1 and HD2 significantly improved their math and science content knowledge during the grant year. In addition, observation data shows significant improvement in the use of endorsed pedagogical practices for both math and science teachers.

The report concludes that: the process performance measures of the grant were met or exceeded; baselines for the outcome performance measures of the grant were established; teachers significantly improved both their content knowledge and use of endorsed pedagogical practices; the project has been well administered; the Master Teachers and classroom teachers are enthusiastic about the TEAMS; and the TEAMS concept is being rapidly integrated into the Districts' cultures.

The report recommends that: a school district which is closer to HD2's demographics and student achievement be identified for use in the outcome evaluation, methods be found for obtaining individualized student data for comparison purposes and the Districts continue to strongly support the MSP project.

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INTRODUCTION

Teachers Equipped to Advance Math and Science (TEAMS) is a joint project between Hampton School District 1 (HD1) and Hampton School District 2 (HD2). Hampton School District 1 is the lead district for the project. TEAMS is funded by a Math and Science Partnership (MSP) grant from the SC Department of Education and began in September 2013. This grant follows up on a successful three year MSP grant District One conducted during the period of October 1, 2010 to September 30, 2013. This evaluation covers the period of October 1, 2013- September 30, 2014, the first year of the new grant.

Goals and Objectives of TEAMS

MSP grants are intended to improve the mathematics and science outcomes for students by improving the teaching capabilities of mathematics and science teachers. Hampton School Districts One and Two proposed accomplishing this by a systemic change in mathematics and science classrooms through TEAMS. The TEAMS's 2010 design was built on findings of a study that identified factors which enabled at-risk students to succeed. The successes of the first grant took HD1 in the right direction; yet a lot of work remains to be done to help all Hampton County students succeed. To do so, TEAMS is designed to fill two needs for Hampton County schools.

- Hampton County schools need to improve student achievement in mathematics and science to break generational cycles of poverty.
- Hampton County teachers need to increase content knowledge and to use endorsed pedagogical practices in order to improve math and science education and students' performance and proficiency

The goal of this program is to raise student achievement in math and science through ongoing job-embedded PD designed to increase teachers' content knowledge and use of current practices. The vision is to create highly effective teachers by developing their knowledge of current content standards and by replacing traditional methods with engaging strategies that involve inquiry and practices which promote higher-level thinking, open-ended problem solving, and relevant project-based learning (PBL). Master Teachers (MTs) provide classroom coaching support regarding practices which foster conceptual learning of content while whole school Vertical Teams, Grade Level Teams, and CCSS School Implementation Teams (SITs) raise student achievement in mathematics and science by reforming teachers' thoughts and habits in the classroom to value and embed research-based best practices in their instruction. The TEAMS concept is based on ten process objectives and success is to be measured through one outcome objective. Professional Development (PD) in content mastery, best practices, and the use of technology from Institutes of Higher Education (IHE's), Homecourt Publishers, S²TEM Centers, and Invent Now, Inc., among others, is provided to make elementary, middle, and high school classroom teachers more effective.

The process objectives are:

Objective 1: By July of each year, at least 85% of HD1 and HD2 math & science teachers will engage in at least 60 hours of PD provided by IHEs, S²TEM Centers, and other certified instructors.

Objective 2a: By August 2013, HD1 will identify nine MTs; HD2 three MTs.

Objective 2b: By December 2013, S²TEM CENTERS Center will train three HD2 MTs and new HD1 MTs to use the Cognitive Coaching Model.

Objective 3a: By January 2014, HD1 and HD2 will initiate training for content support and leadership teams including Vertical Teams for each school and across feeder systems in each district, and Grade Level Teams.

Objective 3b: By July of each year, teachers selected for school/district teams will engage in at least 60 hours of leadership development PD.

Objective 4: By September of 2013, HD1 and HD2 will initiate training for SITs to develop each school's strategic plan for Math CCSS classroom implementation and to monitor content delivery and best practice use.

Objective 5a: By April of each year, the MTs will assist 100% of teachers with the development of an action plan with at least one goal for content growth and one goal for use of research-based best practices.

Objective 5b: By June of each year, MTs will provide all teachers with at least three follow-up days of job-embedded PD guided by teacher's action plans detailing their content PD and their goals.

Objective 6a: By June of 2014, the MTs, Vertical Teams, and Grade Level Teams will design a webpage and publish a digital packet of all PD materials and resources developed for dissemination and replication.

Objective 6b: By July 30 of Years 2 and 3, the MTs, Vertical Teams, and Grade Level Teams will publish all new PD materials and resources developed for dissemination and replication to the digital packet.

The single outcome objective is:

Objective 7: By June of years 2 and 3, grade level attainment in math & science on state exams will improve by at least 3% annually compared to Year 1 baseline data to narrow the gap between district and state averages.

Project TEAMS is intended to serve 87 teachers and 2,670 students in seven schools in HD1 and 21 teachers and 1,814 students in three schools in HD2.

The grant also seeks to meet the Government Performance and Result Act (GPRA) measures established by the federal government for MSP grants. These are:

1. GPRA Measure 1: The percentage of teachers who significantly increase their content knowledge in mathematics and science, as reflected in project-level pre-and post-assessments.
2. GPRA Measure 2: The percentage of students in classrooms of MSP teachers who score at the basic level or above in State assessments of mathematics or science.
3. GPRA Measure 3: The percentage of students in classrooms of MSP teachers who score at the proficient level or above in state assessments of mathematics or science.
4. GPRA Measure 4: The percentage of MSP projects that report using experimental or quasi-experimental design for their evaluations.
5. GPRA Measure 5: the percentage of MSP projects that use experimental or quasi-experimental design for their evaluations that are conducted successfully and that yield scientifically valid results.

TEAMS Description

All the professional development (PD) activities focus on objectives to increase teacher knowledge and improve student achievement. Through PD, teachers learn content using the same practices that they will use to help students learn. Activities which align classroom content and practices to the CCSS for Math and SC Science Standards include 60 or more PD hours annually for each math and science teacher; leadership training for Master Teachers, Vertical Teams, Grade-Level Teams, and SITs; individual teacher Action Plans stating goals for content and pedagogical growth; classroom coaching by MTs; and classroom support by content-focused Vertical Teams, Grade Level Teams, and SITs.

Teachers' content and pedagogical knowledge will deepen as they experience ongoing job-embedded PD. Offering college credit hours will aid progress toward 100% of math and science teachers meeting the SC definition for highly qualified. MTs, guided by S²TEM Centers SC, will provide coaching and guide teachers in the creation of annual Action Plans. The Citadel and USC-Aiken, will teach content using current pedagogies; Invent Now will teach inquiry-based learning using standards-based STEM curricula; and Homecourt will provide PD to strengthen capacity for project-based learning, technology, and resource distribution. TEAMS's activities will energize classrooms with rigorous content and pedagogies. TEAMS will improve achievement by strengthening teachers' content knowledge and use of practices identified by the Math CCSS and *A Framework for K-12 Science Education* (Focus Area 1) to encourage open-ended problem-solving and self-directed learning. By learning as students need to learn, teachers will develop "a firm grounding on theory – understanding how learning occurs and is facilitated" (<http://www.nap.edu>).

Professional teams will support teachers as follows: 1) MTs - job-embedded PD and coaching, 2) Vertical Teams - content support and alignment, 3) Grade-level Teams - grade-level data analysis, decision-making, and resource development, and 4) SITs - implementation of Math CCSS and SC Academic Science Standards. S²TEM Centers will train three HD2 MTs and

newly hired HD1 MTs in the Cognitive Coaching model for eight days in Year 1 and train and develop whole school content-focused Vertical Teams and whole school vertical teams across feeder systems for sixteen days. S²TEM Centers SC will provide MTs and Vertical Team members with onsite PD to improve teachers' content knowledge and pedagogical skills. MTs will learn how to support and challenge their teachers as they develop both District Common Assessments (DCAs) and PBL units. Problem Based Learning will provide rigorous curricula aligned with standards expected for postsecondary study in science, engineering, technology, and math (STEM).

S²TEM Center will guide Vertical Teams, Grade-level Teams, and SITs each year through two content pathways - mathematics and/or science. The initial two days of foundational training will be followed by 14 days of job-embedded follow-up sessions. Over the three years, Vertical Teams will design, implement and modify lessons for Math CCSS and the SC Science Standards using identified practices. The S²TEM Center staff, MTs, and Vertical Teams will move from "development" to "full implementation" of new standards, PBL units and DCAs and will work with Grade-level Teams and SITs for consistent school implementation. Leadership capacity will build cohesive collaboration among teams, within schools, and across feeder systems. MTs will help teachers analyze their DCA results and use disaggregated data to identify areas for modification to close achievement gaps. The Districts will deepen teachers' knowledge, improve practices, and develop resources during Early-Out PD days and 60-hour Summer Institutes (two weeks with three additional days of MT classroom support) focused on content, data analysis, technology, and resource and assessment development.

To increase teachers' knowledge of STEM content and practices, the Citadel will provide teachers with 15 course offerings from The Citadel's Master of STEM Education program. Annually the Citadel will enable at least 15 teachers to earn a minimum of three hours graduate credit. Course titles include: PBL and Interdisciplinary Teaching; STEM Education through Robotics; Research and Statistics for STEM Applications; Teaching, Learning and Assessing with Technology; and Forensic Science. Citadel professors also will visit classrooms and provide online and telephone support.

The University of SC – Aiken will offer teachers graduate credit through two courses. The math course topics, based on CCSS Math and practices, include CCSS and Instructional Rigor; Smarter Balanced Content Specifications and Item Specifications; Achievement Level Descriptors; Webb's Depth-of-Knowledge (DOK)/Cognitive Rigor Levels; Learning progressions; Domains; Mathematical Practices; Effective Use of Technology; Instructional Shifts and Resources. The science course will merge SC Academic Standards' content with math standards and practices. Elementary and middle school teachers will learn science and math content while collaborating to create interdisciplinary units. USC plans to offer a similar course for high school teachers by Year 3.

Invent Now, a nonprofit center for STEM education, will provide 60 hours of inquiry-learning PD using cutting-edge STEM curricula aligned with CCSS for Math and SC Science Standards. Invent Now PD includes an annual six hour foundational session, which "will explore teaching methods that help to develop critical thinkers and creative problem solvers...to foster growth in student achievement". Inquiry-based PBL will have an impact on learning as teachers use these

pedagogies to teach standards-based content and curricula during the regular day or during summer programs. Camp Invention will be taught as summer institutes and Club Invention will be modified and taught as part of the regular school day curricula.

Homecourt Publishers, LLC, will provide PD in PBL aligned to CCSS; the integration and dissemination of online resources; data-driven instruction; and rubrics, constructed response items, and technology enhanced items.

Year 2 and 3's PD plan will mirror Year 1's PD plan. Action Plans will identify the PD each teacher will experience and growth goals. In Years 2 and 3, teachers can choose a different PD or revisit previous PD with a focus on sustaining math and science education reform through increased teacher knowledge, ongoing classroom support and formative feedback, changes in practices and rigor, and self-directed learning.

Purpose and Contents of the Evaluation

The purpose of the evaluation is to provide information that will assist the project staff in meeting the goals of TEAMS and in assuring the continuing improvement of the project.

Process Evaluation

The process of implementation of the program will be reported on in the evaluation. The areas covered in this section will include the ten process objectives, as measured by the performance measures stated in the grant proposal.

Outcome Evaluation

The outcomes of the program will be reported on in the evaluation. The areas covered in this section will be the single outcome objective, as measured by the performance measures stated in the grant proposal. Outcomes will be compared internally between the two Hampton Districts and an outside district.

GPRA Measures

The GPRA measures will be reported as they are stated in the Federal reporting system, along with additional information that may be of help in continuing quality improvement.

The TEAMS Project is designed ultimately to bring permanent change to the teaching of mathematics and science in Hampton County School District One and Two. Among the changes that will be products of the project are:

- Reasonable progress will be made towards 100% of mathematics/science teachers meeting the SC definition for highly qualified in mathematics or science by offering additional college credit hours, increasing content knowledge through aligned activities

designed to improve teachers' understanding of grade-level standards, and by supporting teachers' successful performance on the content area ADEPT teacher evaluation system.

- Activities provided through the partnerships will create reasonable progress toward aligning 100% of instructional materials and practice to the CCSS Mathematics and SC Science Standards.
- TEAMS will raise student achievement and reform math and science education by replacing traditional thought and outdated classrooms with innovative thought and relevant, engaging, content-rich classrooms.
- All professional development activities provided by the S²MART Center, the Citadel, USC-Aiken, Invent Now, and HD1 will have teachers experience the same research-based best practices that they will use to meet students' needs and to raise student achievement.

METHODOLOGY

Introduction

System Wide Solutions (SWS) was the evaluator for the HD1 2010-2013 MSP grant. SWS supported the development of the current MSP grant by writing the evaluation section of the grant proposal and consulting with the two school districts in developing objectives. SWS is familiar with the Hampton School Districts and their on-going efforts to improve outcomes for their students. HD1's previous MSP grant's evaluation outcomes have been applied to plan and improve performance, to help the Project Management Team (PMT) model teachers' training opportunities, and to expand HD1's success to HD2.

Evaluation Approach

SWS will assess the project's effect on teacher content and pedagogy knowledge, measure if this knowledge is being applied in the classroom, and analyze academic achievement data to determine students' growth using an action research approach to provide continuous feedback. Partners use this ongoing information to improve the program and assure success. SWS is conducting both formative and summative evaluations including two levels of evaluation - process and outcome.

The process evaluation assesses the implementation of TEAMS's constituent tasks and subtasks, based on the grant's narrative and objectives. Two methods, qualitative and quantitative, measure the success of each task and subtask. Partners enter quantitative data into the MSP GEMS® information system described below. The system has the data elements to meet state and federal reporting requirements. Surveys, project staff interviews, and direct observations provide qualitative data. The evaluators use this data to answer these questions: 1) How do conducted activities compare to the proposed activities and process objectives; 2) How well does the actual timeline match the proposed timeline; and 3) What impact did any changes to the plan have on the project's ability to achieve the objectives? SWS will continuously report results to the PMT through scheduled face-to-face meetings, telephone conferences, other direct contacts, and summative reports. The real-time reports produced by the MSP GEMS® will provide on-demand access to management, benchmark and other relevant information for the PMT, MTs, and teachers.

The outcome evaluation design is quasi-experimental. The experimental group consists of four subgroups: HD1 MTs and math/science teachers and HD2 MTs and math/ science teachers. Each district will identify these teachers and make annual adjustments as needed. The outcome evaluation first measures progress toward achieving identified objectives. In the second and third years, after the teachers have had the opportunity to implement what they have learned, the effect of each PD activity will be examined by comparing changes in teacher content and pedagogy knowledge, and student achievement among each group of teachers. Regression statistics will be used to account for differences in student demographics and teacher credentials and to measure the significance of the relationship. Bamberg School District 1 was selected to serve as the comparison group. During the first year of the evaluation, the baseline equivalence

of the comparison group to the experimental group is measured to determine and account for any significant differences in teacher credentials or demographics. In years 2 and 3, the evaluation will include an analysis of the achievement rates of HD1, HD2, and Bamberg students accounting for differences in staff characteristics, advanced degrees, and PD days to determine if differences in student achievement are greater than normal.

The MSP GEMS® online data system serves as the central point for data gathering, storage, statistical manipulation, and routine reporting; and holds the process plan, database, surveys, protocols, reports, and other information. Teachers use the system to complete assessments. Schools import student demographics and achievement, and Master Teachers enter observation data into MSP GEMS® for analysis.

Objectives and Measurement Methods

Objective 1: By July of each year, at least 85% of HD1 and HD2 math & science teachers will engage in at least 60 hours of PD provided by IHEs, S ² TEM Centers, and other certified instructors.	PD activity entries in MSP GEMS
Objective 2a: By August 2013, HD1 will identify 9 MTs; HD2 3 MTs.	MT's names and info.
Objective 2b: By December 2013, S2TEM CENTERS Center will train 3 HD2 MTs and new HD1 MTs to use the Cognitive Coaching Model.	PD activity entries in MSP GEMS
Objective 3a: By January 2014, HD1 and HD2 will initiate training for content support and leadership teams including Vertical Teams for each school and across feeder systems in each district, and Grade-level Teams.	Reports on specific team development activities
Objective 3b: By July of each year, teachers selected for school/district teams will engage in at least 60 hours of leadership development PD.	PD activity entries in MSP GEMS
Objective 4: By September of 2013, HD1 & HD2 will initiate training for SITs to develop each school's strategic plan for Math CCSS classroom implementation and to monitor content delivery and best practice use.	PD activity entries in MSP GEMS and activity observations
Objective 5a: By April of each year, the MTs will assist 100% of teachers with the development of an action plan with at least one goal for content growth and one goal for use of research-based best practices.	Review of action plans
Objective 5b: By June of each year, MTs will provide all teachers with at least 3 follow-up days of job-embedded PD guided by teacher's action plans detailing their content PD and their goals.	PD entries in MSP GEMS; observations; Interviews
Objective 6a: By June of 2014, the MTs, Vertical Teams, and Grade Level Teams will design a webpage and publish a digital packet of all PD materials and resources developed for dissemination and replication.	Review of webpage and packets
Objective 6b: By July 30 of Years 2 and 3, the MTs, Vertical Teams, and Grade Level Teams will publish all new PD materials and resources developed for dissemination and replication to the digital packet.	Review of packets.
Objective 7: By June of years 2 and 3, grade level attainment in math & science on state exams will improve by at least 3% annually compared to Year 1 baseline data to narrow the gap between district and state averages.	All student pre and post scores entered into MSP GEMS®

Phases of the Evaluation

Phase 1 – Preparation for Data Gathering

In this phase, the grant application was reviewed with the staff of the Districts involved in the management of the grant. A particular emphasis was placed on the goals, objectives, outcomes and activities of the project. The evaluation design of the project was reviewed and questions regarding availability of data, key informants and access to qualitative information prepared.

The MSP GEMS® online information system was modified to collect the necessary quantitative information related to the evaluation. Grant management staff, master teachers and classroom teachers were provided access to the GEMS® and training on how to use the system to enter necessary information. Users have access only to their own data, or, in the case of administrators of the project, to the project's data.

SWS developed an observation instrument to be used by the Master Teachers and the Project Director to observe the teachers. A section was added to the MSP GEMS® so that this information can be directly entered by the observers.

Phase 2 – Gathering and Reviewing Information

Information gathering occurred in five stages. The first stage was a meeting with the project director and the Director of Special Projects for HD1 and representatives from HD2. In this meeting, the data needs and availability of the information were discussed and a list of actions to assure all necessary data would be gathered was created.

The second stage was the development of a data plan by SWS. This plan was circulated to the grant managers and comments solicited. The plan was then finalized.

The third stage was to request the data and qualitative information which was available at the district level from the appropriate individuals. This information was made available over time.

The fourth stage was to monitor the data being entered into the GEMS®, make adjustments as necessary and to provide special reports or feedback to the project. These actions were followed up with telephone and email contacts with members of the project management team.

The fifth stage was to develop interview schedules in order to conduct a series of on-site interviews with the Master Teachers and classroom teachers. Following development of the interview schedules, on-site interviews were conducted. (See Appendix One for copies of the schedules)

The sixth stage was to access the standardized test score data for Hampton County and Bamberg School District 1 for the period under study. Standardized test score data (PASS, HSAP and EOCEP) for the Hampton School districts were provided by the districts. This was followed by a

final stage of reviewing what information was now in the database for the evaluation of the project and requesting any missing information from the districts.

Phase 3 –Preparation of the Information and Data

The qualitative information gathered was placed in a single qualitative database for analysis. The quantitative data was exported from the GEMS® into the Statistical Packages for the Social Sciences (SPSS) for analysis. Tables and graphs describing the outcomes were developed in Microsoft Excel and exported to Microsoft Word.

Phase 4 – Analysis of Information and Data and Development of the Report

In developing the report, the following steps were conducted:

1. The evaluation team achieved consensus on:
 - *What Happened?* (Findings of the Study) What activities and actions took place during the grant period?
 - *So What?* (Conclusions of the Study) What meanings do the activities and the actions have in terms of the goal and objectives of the project and the expressed desires of the participants? To what extent have the aims of the project been achieved? Which activities were most successful? Which could be improved upon?
 - *Now What?* (Recommendations of the Study) What changes and additions does the evaluation team believe might be useful in advancing the goals of the project?
2. The sections of the report were assigned to different team members for drafting and all team members edited the report.
3. The final report includes a description of the grant and its goals and objectives; implementation findings; findings of progress toward the project objectives; the conclusions; and the recommendations. This resulted in a detailed, written documentation of the progress of the grant and possible implications for the future of similar projects.

Organization of the Evaluation

The evaluation is organized into six parts.

- Introduction
- Methodology
- Process findings
- Outcome findings
- Conclusions
- Recommendations

Limitations of the Evaluation

The observation survey was completed by master teachers at their discretion; therefore, the time between the pre-survey and the post-survey varies by teacher. This variation limits the ability to accurately measure the effect of the program over time. Efforts are being made to have master teachers complete the survey at the same time for both the pre assessment and the post assessment.

For future evaluations, student level achievement data for comparison districts will need to be obtained in order to accurately measure the change in student achievement that can be attributed to the project. This will require the cooperation of all the districts involved, including the comparison districts. For this evaluation, student level data from Bamberg was not available.

Determining appropriate school districts for comparison is difficult in that HD1 and HD2 are very different demographically and in student achievement. Bamberg School District 1 was chosen in the evaluation plan as the comparison district. This district is similar in demography and achievement to HD1. However it is considerably different on these same parameters from HD2. Therefore, in this evaluation comparison are only made between HD1 and Bamberg School District 1 and are not between HD2 and Bamberg School District 1.

FINDINGS PART I: PROCESS EVALUATION

Introduction

The process evaluation reports first on the numbers and makeup, to the extent possible, of the teachers and students served by the grant. It then reports on the implementation of the project by examining the progress towards completing the planned activities of the grant proposal. This is followed by information on progress made toward meeting the performance measures for the ten process objectives.

Teachers Served

In 2012-2013, the year which will serve as the baseline year, 5.8% of the classes in HD1 and 11.8% of the classes in HD2 were not taught by highly qualified teachers. In HD1, 61.8% of teachers had an advanced degree, and the 170 teachers (all subjects) participated in an average of 13.2 professional development days each year. In HD2, 60% of teachers had an advanced degree, and the 65 teachers (all subjects) participated in an average of 9.7 professional development days each year.

Of the 118 teachers who participated in the project during the 2013-2014 school year, 89 were HD1 teachers and 29 were HD2 teachers. Of those from HD1, 30 (33.7%) teach students in grades kindergarten through second (primary), 29 (32.6%) teach students in grades third through fifth (elementary), ten (11.2%) teach students in grades sixth through eighth (middle), and 20 (22.5%) teach students in grades ninth through twelfth (high). Of the 29 from HD2, 16 (55.2%) teach students in grades kindergarten through fifth (elementary), six (20.7%) teach in middle school, and seven (24.1%) teach in high school. (See Table 1 and Figure 1.)

Table 1 and Figure 1: Grade Level Taught by Teachers

	HD1		HD2	
	#	%	#	%
Primary Grades	30	33.7%	0	0.0%
Elementary Grades	29	32.6%	16	55.2%
Middle School Grades	10	11.2%	6	20.7%
High School Grades	20	22.5%	7	24.1%
Total	89	100%	29	100%

Grade Level	HD1 Count	HD1 %	HD2 Count	HD2 %
Primary	30	33.7%	0	0.0%
Elem	29	32.6%	16	55.2%
Middle	10	11.2%	6	20.7%
High	20	22.5%	7	24.1%

Of the 89 HD1 classroom teachers who participated in 2013-2014, 23 (25.8%) teach only math, 16 (18%) teach only science, 46 (51.7%) teach both math and science, and four (4.5%) teach other related subjects (such as engineering, marketing, business, etc). Of the 29 HD2 classroom teachers who participated in 2013-2014, nine (31%) teach only math, seven (24.1%) teach only science, and 13 (44.8%) teach both math and science. (See Table 2 and Figure 2.)

Table 2 and Figure 2: Subjects Taught by Teachers

	HD1		HD2	
	#	%	#	%
Mathematics Only	23	25.8%	9	31.0%
Science Only	16	18.0%	7	24.1%
Both Math and Science	46	51.7%	13	44.8%
Other	4	4.5%	0	0.0%
Total	89	100%	29	100%

Students Served and Their Demographics

In 2013-2014, there were approximately 2,453 students enrolled in seven schools in HD1. HD1 has two primary schools (grades PK-3), three elementary schools (two schools grades K-6 and one school grades 4-6), one middle school (grades 7-8), and one high school (grades 9-12). About half of the students in the district (55%) are African American, 43% are Caucasian, and 2% are of other races. The majority of the youth receive free (65%) or reduced (10%) meals. During the 2012-2013 school year, the most recent year for which the state report card is available, 8.6% of students had a disability, the attendance rate for students was 96.3%, the retention rate was 3.1%, and 7.1% of students were older than usual for their grade. The annual dropout rate was 2.8% and the four year cohort graduation rate was 85.1%.

During the 2013-2014 school year, there were approximately 873 students enrolled in three schools in HD2. HD2 has one elementary school (grades K-5), one middle school (grades 6-8), and one high school (grades 9-12). Almost all of the students in the district (94%) are African American, 2% are Caucasian, and 4% are of other races. The majority of the youth receive free (85%) or reduced (5%) meals. During the 2012-2013 school year, the most recent year for which the state report card is available, 15.4% of students had a disability, the attendance rate for students was 93.9%, the retention rate was 3.3%, and 7% of students were older than usual for their grade. The annual dropout rate was 1.1% and the on-time graduation rate was 77.9%.

Project Management

The Project Management Team (PMT) applied the EBDM Cycle to develop the plan for the project. The PMT continued to oversee and manage the project throughout the grant year. The team met quarterly (indicated below with an *) and as needed through conference calls, e-mails, face-to-face meetings, and virtual meetings to monitor and assess the project's progress to develop new strategies, make adjustments, and address challenges. The PMT consists of Rhonda Willis, Jack Hutto, Dr. Carole McGrath, Anita Padgett, and Devonna Youmans and is supported by Dr. Douglas E. McTeer, Kenna Alewine, Amy Threatt, Darren Prevost, Dr. Kathy Richardson-Jones, Dr. Gary Senn, Ben Bache, and Britt Magneson. Input for meetings also was garnered

from Master Teacher meeting minutes. Each meeting had a specific topic and lead to specific outcomes. The topics of this year's meetings were:

*September –

- Needs assessment review to plan activities for schools
- Plans to support School Implementation Teams (SITs) development of school strategic plans and their monitoring of the implementation of CCSS-Math
- Plans to support Master Teachers' knowledge of the Science Frameworks and new state science standards
- Continuous improvement throughout the system
- Discussion to support partnering district and grandfathering expectations of its Master Teachers until they have completed Cognitive Coaching professional development; further discussion on the development of teachers' Action Plans, content pre- and post-assessments, and teachers' engagement in professional development
- Special meeting with partnering district's curriculum coordinator to align his initiatives with the MSP goal and objectives
- Technical assistance for districts' schools and planning and implementation of PBL professional development cycles

October –

- Review of the draft of the district level plan and support of school level plans
- Planning to initiate PBL cycles
- Review of Master Teacher duties and alignment with other district initiatives
- Planning of logistics for professional development sessions, courses, and summer institutes by Master Teachers
- Review of DCA and benchmark development for all grade levels

*December -

- Inquiry Learning professional development sequence and curriculum for job-embedded practice in math and science classrooms
- Strategic plan with math/science and STEM principles
- Continuous improvement throughout the system
- Planning to support School Implementation Teams through professional development focused on building schools' leadership capacity and professional development provided during meetings at each individual school
- Planning professional development to support teachers desiring to complete STEM graduate courses

January –

- Completion of the district level plan and support of the school level plans
- Planning to initiate PBL cycle 2
- Plans finalized to communicate details to teachers regarding STEM Education graduate courses offered.

February –

- Inquiry class progress monitoring and planning for job-embedded professional development during summer institutes PBL units
- Planning to offer college graduate course on integrating math and science content for elementary teachers in partnering district during summer 2014
- Assessment of the PBL professional development cycles, development and implantation of PBL units

*March –

- Inquiry Learning monitoring on the progress of teachers using Club Invention curricula and science and math instructional best practices and inquiry methods in the classroom; professional development planning for teachers planning to use the Camp Invention curricula for job-embedded practice of inquiry learning methods
- Continuous improvement throughout the system
- Planning to initiate PBL cycle 3
- Monitoring of PBL professional development and use of best practices
 - Points discussed –
 - ✓ PBL units need to be designed from the standards perspective, starting with "chunks/domains", such as, 3rd grade - Sound, Animal Adaptations, Heat, Earth Changes.
 - ✓ Assessment options are currently very limited. Needs: grade level standards with questions options that can be chosen for custom assessments, which can be "activated" online.
 - ✓ List of reflective exit slips
 - ✓ Grade level curriculum sequence: for ex. subjects stacked in rows to make comparisons easy when corresponding themes that could be integrated across subject areas.
 - ✓ PBL template edited to include a section for standards

May –

- Discussion of middle school level and gifted and talented students' needs and planning for summer institutes to provide job-embedded professional development for math/science teachers of these grades and subpopulations during summer 2014

June –

- Plans finalized for summer professional development particularly graduate course registrations
- The need to provide additional support for K-12 teachers through the development of pacing guides
- Continuous improvement throughout the system

*July –

- Inquiry learning follow-up of professional development which occurred during summer institutes; discussion to implement professional development using new curricula and instructional strategies to increase middle school student achievement in 2014-2015.
- Assess participation in graduate course and initiate discussion of new graduate course offerings for spring and summer 2015

- Strategic plan with math/science and STEM principles
- Review of teacher participation in the STEM Master's program in Year 1

August –

- Continuous improvement throughout the system
- Sustainability after MSP and other funding sources dissipate
- Further development needs for Grade-Level teams to support the implementation of new science standards and CCSS-Math
- Support needed for School Implementation Teams to transition to School Data Teams in Year 2.

The outcomes were:

- A district strategic plan and school strategic plans were developed to keep TEAMS's goal and objectives focused and aligned to other district initiatives.
- Strategies were identified in the district and school strategic plans and included math/science best practices across the curriculum.
- Schools' strategic plans help SIT members monitor the implementation of the CCSS-Math in all grades.
- The PMT met with administrators to discuss professional development support aligned to school needs to help SIT members monitor classroom implementation of new standards and strategies and to adjust practices as evidenced by observation data. The PMT provided ongoing support with strategic planning and for building leadership capacity within each school.
- The PMT developed a plan to support Master Teachers in understanding math/science principles, mathematical practices, and the Science Frameworks, particularly the cross-cutting concepts in science.
- Professional development was planned and implemented to support teachers of higher achieving students as well as low achieving students.
- A larger percentage of teachers participated in professional development focused on inquiry-based/project-based learning and in STEM practices than in previous years. These best practices became more common in classrooms across the district.
- Schools will revisit and made adjustments to strategic plans in the fall of 2014 with support from PMT members.
- District Common Assessments (DCAs) will be reviewed to ensure their most effective use for student progress monitoring.
- Engineering Is Elementary professional development was planned by the PMT to expand opportunities and to strengthen teachers' ability to embed STEM principles in their instruction.
- Science kit training will be moved to the partnering district in Year 2 to support science instruction. Science standards support will be offered in Year 2 specifically designed to support teachers of grades 3-5.

- Numeracy Leader training will be added in Year 2 to develop a cohort of teachers who are equipped to support other classroom teachers with teaching students foundational mathematical concepts across grade levels.
- The PMT will add more opportunities for LEGO robotics professional development for teachers at the middle and high school levels as a practical laboratory experience and to increase engineering practices.
- Schools will analyze school data and trends to assess the effectiveness of instructional strategies and to identify needs. PMT will provide ongoing support to School Data Teams to help them gather and interpret data to increase student achievement.
- The PMT will work with a partnering university to complete an RFP that if funded will support teachers of geometry through targeted professional development and ongoing job-embedded support.
- Master Teachers created a brochure outlining professional development support they could and/or have provided for teachers in math/science and other curricular areas.
- Master Teachers created a digital page to provide resources for math/science teachers. Resources will be added as identified or developed.
- The PMT will again provide an overview of the strategic plan, talk about STEM principles, and communicate next steps that will help with dropout prevention and increase student achievement to all district math and science teachers.

Year 2 and 3's PD plan will mirror Year 1's PD plan. Action Plans will identify the PD each teacher will experience and growth goals. In Years 2 and 3, teachers can choose a different PD or revisit previous PD with a focus on sustaining math and science education reform through increased teacher knowledge, ongoing classroom support and formative feedback, changes in practices and rigor, and self-directed learning.

Professional Teams and Their Training

Vertical Teams provide content support and alignment. The Vertical Teams are composed of the Master Teachers. They represent all schools and all grade levels. Vertical team meetings were held every month from September-May 2013 and then began again in August. Classroom teachers comment that the leadership of the vertical teams is changing the culture of the schools and across the districts by giving the students responsibility for their learning.

The HD1 Master Teachers Vertical Team is a strong cohort. HD2 is still in the formative stages, having completed training this year and with two new members. The new members are presently in Cognitive CoachingSM training. However, the previous Master Teachers for those schools are providing the fall classroom observations to give coaching support until the new Master Teachers are certified. The Districts will begin a follow-up to Cognitive CoachingSM for all Master Teachers in the new school year called Differentiated Learning for Adult Learners to further strengthen this group. This PD will be provided by the S²TEM Centers.

Grade-level Teams provide grade-level data analysis, decision making and resource development. The Grade Level Teams are targeted for growth in the 2014-2015 school year. They received professional development through the Master Teachers in the 2013-2014 grant year. They are

slated for the State Department of Education training which began the summer of 2014 and specifically designed numeracy, engineering, and science standards support this year through the S²TEM CENTERS Center. With this support, they will become a more independent body of teachers and will begin providing professional development for other teachers by spring and summer of 2015 and continuing in Year 3 of the grant.

The Grade-Level Teams are the teams of teachers who have worked with Master Teachers to develop pacing guides and common assessments. Most of these teachers also serve on the SITs. Professional development became more targeted for this group during the summer of 2014 since the science standards have been approved. Grade-Level Team members attended SDE science trainings in July and August of 2014 and will continue this training through a series of four regional meetings during 2014-2015. The S²TEM Centers also increased their capacity by providing Numeracy Training for math Grade Level Teams, Science Standards Support Training, and Engineering Is Elementary Training during 2014-2015.

The Common Core State Standards School Implementation Teams (SITs) members include the building administrator, the Master Teachers in each building, and representative core area classroom teachers in each school. The SITs support implementation of CCSS math and SC Academic Science Standards. Some schools have included guidance counselors, related arts, and special education teachers on their teams. The SIT Teams strengthened during the grant year as the months progressed. They are much clearer on their purpose and mission at the beginning of the new school term than they were at the beginning of last school year. The project manager has worked with the HD2 leadership and they will formally organize their SIT teams during the fall 2014 semester.

The SIT members received a full day of leadership training in the fall of 2013. They received ongoing leadership support through the S²TEM Center as the consultants actually attended some of each school's SIT meetings. The SITs met at their schools monthly. During the S²TEM Centers visits, the consultants provided feedback and support. In September these teams received another full day of leadership training again from the S²TEM Centers. This PD was developed based upon data and feedback the consultants gathered through their conversations with the project director, PMT, Master Teachers, SIT members and through their visits and observations.

The organization of the teams for the two districts is portrayed in Table 3 and Table 4.

Table 3: District 1 Team Structure

	Ben Hazel	Brunson	Fennell	Hampton	Varnville	North District	Wade Hampton
MSP MT	Diane Stanley & Julie Huber	Terry Wright & Tracey Preston	Saidell Moore & Violet Salisbury	Rachael Phillips, Terri Stansfield, & Anthrown Roberts	Dawn Smith & Robin Taylor	Jacqueline Hatfield Smith & Mysti Long	
CCSS School Implementation Team	Cassandra Williams	Greg Ackerman	Willie Coker	Bonnie Wilson	Donna Kinard	Pat Brantley	Dr. Barry Rosenberg
	Blythe Delgado	Cheryl Kaye Hill	Violet Salisbury	Kristy Wood	Amanda Altman - C	Angelia Cooler	Betty French
	Clarissa Geddis - C	Misty Cope	Ashley Walker - C	Rachael Phillips	Brandy Peeples	Chris Mills	Charlie Boyles
	Jessica Ginn - R	Peggy Smith	Virginia Braswell	Susan Padgett	Dawn Smith	Dawn Stuckey	Gangadhar Padigela
	Jody Bostick	Tamira Brooker - R	Verta Thompson - R	Terri Stansfield	Elaine Rooker	Donna Griner - C	Heather Skinner
	Julie Huber	Tamra Bishop - C	Kim Roberts	Dr. Trina Tant	Jackie Anderson	M. Jane Collins	Jacqueline Smith - C
	Michelle Purdy	Terry Wright	Johnnie Lester	Erin Long - R	Joyce Topper	Myrriah Hanna - R	Kaye Guty - R
	Monique Smalls - C	Tracey Preston	Amy Murdaugh	Jody Lawton	Kelly Shipes	Lavern Capers	Lauren Burke
	Ryan Brunson		David Bell	Carolyn Robinson	Michelle Hiers	Susan Jarrell	Matthew Carrington
	Selby Fowler			Melonee Ginn - C	Robin Taylor		Mysti Long
				Dr. Kimberly Mathis	Chris Bartley		Jessica Lairson
				Ruth Benson	Sarah Gilliland - R		
				Stacy Willis			
CCSS District Implementation Team	Jody Bostick	Tracey Preston	Ashley Walker	Rachel Phillips	Michelle Hiers	Angelia Cooler	Mysti Long
				Dr. Trina Tant			Rebecca Ginn

Table 4: District 2 Team Structure

	Estill Elem	Estill Middle	Estill High
MSP MT	Mamie Jenkins	Sarah Williams	Chitra Mahajani
CCSS School Implementation Team			

Master Teachers

All new Master Teachers received Cognitive CoachingSM training through the S²TEM Centers. Cognitive CoachingSM applies a solution focused approach to adult learning using trained coaches who assist teachers and is designed ultimately to change the approach of entire organizations to teaching and learning.

Coaches must be non-judgmental, in order to encourage reflective practice and to support others to self-directed learning. To encourage reflection, cognitive coaching focuses on a teacher's thinking, perceptions, beliefs, and assumptions and how these affect practices. A cognitive coach collects data and learns to pose questions to engage the teacher in reflective thinking. According to Costa and Garmston, the developers of Cognitive CoachingSM, a cognitive coach "...uses tools of reflective questioning, pausing, paraphrasing, and probing for specificity." A cognitive coach helps another person "to develop expertise in planning, reflecting, problem-solving, and decision-making. These are the invisible tools of being a professional, and they are the source of all teachers' choices and behaviors." A cognitive coach must be able to work effectively with different personality types, different learning styles, different philosophies, and different stages of a teacher's development.

Sixty contact hours of Cognitive CoachingSM training was provided to the 14 Master Teachers. The Master Teachers also formed into a support group, supported by an outside consultant, but generally self-directed. The Master Teachers each provide coaching to their assigned teachers within their own schools.

The master teachers continue to receive telephone and face-to-face technical assistance from the S²MART Center. During the 2013-2014 grant year, 7 new master teachers participated in Cognitive Coaching training from the S²MART Center. During the year the master teachers also participated in a total of approximately 60 hours each of monthly master teacher meetings to provide support and coordination.

The master teachers place a great deal of value on their once a month peer supervision and collaboration meetings, which they see as critical to their development as a group and as a means for sharing successful methods. The master teachers have developed a common vision of a shared community of mutual support among all STEM teachers across the Districts. The agendas of these meetings may be found in Appendix 2.

Action Plans

One hundred and three action plans were reviewed. All had been modified with methods to bring the goals of the project into the classroom. A typical plan may be found in Appendix 3. All teachers participating in the project in HD1 and most in HD2 had completed plans.

Developing a Learning Community

The teachers report that Project Based Learning (PBL) and Cognitive CoachingSM have changed the culture of the schools and the district. During the 2013-2014 school year, much of what had been worked towards during the first grant came to fruition in HD1. The students are more excited and projects are being implemented, such as gardening, improving halls, and so on. The students are giving more than the teachers ask. Some teachers express this as a domino effect - once the teachers get past their comfort zone, the students do too and this creates a learning community. The Master Teachers carry PBL to teachers who didn't take formal classes in it. Teachers are collaborating with one another and passing on new ideas. Having the entire school community involved in learning has made a tremendous difference in students, and has also led to making use of other resources in the community.

Comments by classroom teachers made in interviews are:

“Allowing students to take charge of their own learning is preparing them for the real world. The students are being made aware of their importance to the future of the community.

Teachers are supporting one another and learning from one another how different subjects tie together. Teachers are being steered into technology methods (like Google Earth) while the students are getting new apps and access laptops. The Master Teachers support the movement to technology, but the students are often ahead of the teachers once given the opportunity. Students are being given the chance to use products, such as Excel and other Microsoft Office programs that they will have to know to get along in the world.

Schools are now more student centered than teacher centered. Students have to take responsibility for their own learning. TAP and MSP together are assuring that all children will be at a high level of critical thinking and will be their own person. They are coming to understand that process leads to success rather than rote answers. The students are learning how to think. Being able to implement inquiry based learning lets students really get involved. The students react favorably to this, and lead themselves.

Inquiry based learning has become part of the way the district is administered and how teachers interact with one another. The teams in the schools and district operate on the same principles that are expected from the students.

The teachers believe they have the support of the superintendent and district office. Teachers are heard more now than in the past and can be more outspoken. The district community has established a common vision and then moved forward with it. The vision is to be a collaborative community for students to be self-learners. Ultimately, the students stay in the community and create the future of the community. How students progress will affect them, the community and the state.

The master teachers are building a community of teachers and an atmosphere of cooperation and collaboration among and across schools to exchange information and ideas. Classroom teachers

see the master teachers as leaders in this learning community and turn to them for guidance in implementing changes in policy as well as this exchange of information.

Teachers are embracing the new techniques of how to learn to do a better job by learning from one another. The states of mind about how to learn how to teach are changing across the District. The master teachers don't always use the approach from the original training. Rather, they hold a conversation with the teachers. They often learn from the teachers and teachers learn from one another. Master teachers are often mediators among the teachers. Knowledge is passed from teacher to teacher with master teachers) facilitating that process.”

The classroom teachers perceived the master teachers as providing the following support:

- Helping them collaborate on lesson plans and strategies
- Helping with common curriculum standards
- Providing materials
- Providing expertise and classroom visits
- Clarifying goals
- Helping them get their thoughts together
- Proving a calming effect
- Helping to use technology
- Providing expertise and planning help
- Helping with teaching style
- Providing collaboration on lesson plans and strategies
- Helped develop teams

In addition, master teachers reported that:

- Support was provided by the master teachers on preparing for the new Common Core Standards.
- The master teachers helped in developing benchmarks for project-based learning.
- The master teachers helped classroom teachers learn how best to use the data from testing to develop individualized plans for students.
- The master teachers secured classroom materials for teachers.
- Master teachers provided expertise on particular subjects.
- Master teachers serve as models for critical questioning so that teachers can evaluate themselves and evaluate their own work.
- Master teachers supported classroom teachers as they developed their lesson plans and action plans.

The master teachers provided individualized support to classroom teachers throughout the year. The specific supports most often mentioned by teachers include:

- The master teachers are a resource for ideas for specific teaching situations
- The master teachers help teachers learn how to use technology in the classroom

- The master teachers videotaping of the teachers while they taught, and then downloading it for viewing by the teachers so they could see how they did things themselves without anyone else having to critique them directly. The teachers found this helped them reinforce the effective and correct the ineffective.
- The methods provided by the master teachers have helped classroom teachers learn to think about the way they teach, not just about the content.
- The master teachers are available for collaboration on lesson plans and strategies as needed.
- When asked to, the master teachers come into the classrooms to offer an unbiased sounding board.
- The master teachers provide unbiased feedback.
- The master teachers help classroom teachers clarify goals.
- The master teachers help with planning by asking the right questions and teaching the classroom teachers how to ask themselves the right questions.

Master teachers provided a total of 321 observations and consultations during the school year

Professional Development

Table 5: Professional Development Provided in 2013-2014

Training Type	Trainings Completed			Trainings in Progress			Total for All Trainings		
	Events	Staff	Hours	Events	Staff	Hours	Events	Staff	Hours
Summer Institute	9	32	2280	0	0		9	32	2280
Graduate Course	5	18	1080	0	0		5	18	1080
District Professional Development	14	86	6387	0	0		14	86	6387
Instructional Coaching	251	75	1091	3	3	3	254	75	1094
Total	279	119	10,838	3	3	3	282	119	10,841

There was a total of 10,841 hours of professional development during the grant year. There were four different types of professional development provided. Detailed descriptions of the professional development may be found in Appendix 4.

Summer Institute

Different organizations provided Summer Institute professional development.

1. The ETV/ELearning SC provided three e-learning courses designed to support participants' instructional practices and increase their content knowledge.
2. Invent Now provided three experiences that explored teaching methods that help to develop critical thinkers and creative problem solvers. This hands-on inquiry-based workshops engaged educators in an experience that challenged participants to incorporate enhanced science, math, and creative problem solving-skills to foster growth in student achievement.

3. Homecourt Publishers provided two experiences on Project Based Learning. Participants began by exploring the www.pblproject.com/ site for an in-depth understanding of project based scenarios. Participants then collaborated to develop cross-curricular project-based learning units to implement in their classrooms. They also learned how to integrate technology and use the Teacher Toolbox operating system and data base to make their units available online to other teachers for use in the classroom.
4. The Science P.L.U.S. Institute at Roper Mountain Science Center provided three experiences. These experiences encouraged hands-on active learning in science classrooms. The course brings teachers from throughout the state to the Center for an intensive one-week summer class. Participants were active learners, not passive listeners. The 30 hour Institute offered a variety of courses based on a particular subject for specific grades and modeled hands-on, inquiry-based teaching techniques. The remaining 30 hours are job-embedded in the classroom.

Graduate Courses

Five different graduate courses were provided by The Citadel and USC-Aiken.

District Professional Development

District professional development falls into several different categories. These are:

1. Middle and High School Standards Support
2. Content Enrichment Project Lead the Way STEM
3. Support for Master Teachers
4. S²TEM Centers Math and Science Classroom Support
5. Homecourt Publishing Project Based Learning
6. Clemson Extension Service

Instructional Coaching

Cognitive CoachingSM is a supervisory/peer coaching model that capitalizes upon and enhances cognitive processes. Art Costa and Bob Garmston, the founders of Cognitive CoachingSM, define it as a set of strategies, a way of thinking, and a way of working that invites self and others to shape and reshape their thinking and problem solving capabilities. This professional development was provided by S²TEM Centers.

Process Objectives

Objective 1: By July of each year, at least 85% of HD1 and HD2 math & science teachers will engage in at least 60 hours of PD provided by IHEs, S²TEM Centers, and other certified instructors.

During the 2013-2014 grant year, teachers in HD1 completed an average of 4.4 professional development activities for an average of 107.3 hours per person. Of the 90 HD1 teachers, 85 (94.4%) completed 60 hours or more. Teachers in HD2 completed an average of 1.2 professional development activities for an average of 78.6 hours per person. Of the 29 HD2 teachers, 27 (93.1%) completed 60 hours or more. Overall, 94.1% of teachers in both HD1 and HD2 participated in 60 hours or more of professional development during the grant year, **thereby exceeding this objective.**

Objective 2a: By August 2013, HD1 will identify 9 MTs; HD2 3 MTs.

During the 2013-2014, HD1 and HD2 identified at least one Master Teacher for each school in their districts. In Hampton SD 1, two MT's were selected for Brunson Elementary and Varnville Primary, three were selected for Hampton Elementary, and one Master Teacher was shared by the middle and high school. Therefore, 11 Master Teachers served during the grant year in HD 1, and three served in HD 2. **This objective was exceeded.**

Objective 2b: By December 2013, S²TEM Centers will train 3 HD2 MTs and new HD1 MTs to use the Cognitive Coaching Model.

From December 2, 2013 to March 11, 2014, the S²TEM Centers provided 60 contact hours of Cognitive Coaching training to the 14 Master Teachers, 11 of whom were from HD1 and three of whom were from HD2. **The objective was exceeded**, however the accomplishment of the objective was delayed slightly.

Objective 3a: By January 2014, HD1 and HD2 will initiate training for content support and leadership teams including Vertical Teams for each school and across feeder systems in each district, and Grade-level Teams.

The teams were established and training conducted as described in the Professional Team section above. **This objective was met.**

Objective 3b: By July of each year, teachers selected for school/district teams will engage in at least 60 hours of leadership development PD.

There were 76 staff who received an average of 28.7 hours of leadership development PD during the year. However, it is not currently known by the evaluators which individuals are on which teams, and there appears to be a good deal of duplication of members across teams. The evaluators are therefore unable to measure this objective at this time, but will work with the Districts to do so in the future.

Objective 4: By September of 2013, HD1 & HD2 will initiate training for SITs to develop each school's strategic plan for Math CCSS classroom implementation and to monitor content delivery and best practice use.

Training was initiated by September of 2013. **This objective was met.**

Objective 5a: By April of each year, the MTs will assist 100% of teachers with the development of an action plan with at least one goal for content growth and one goal for use of research-based best practices.

All teachers in HD1 and most teachers in HD2 were assisted and developed an action plan with at least one goal for content growth and one goal for use of research-based best practices. **This objective was met.**

Objective 5b: By June of each year, MTs will provide all teachers with at least 3 follow-up days of job-embedded PD guided by teacher's action plans detailing their content PD and their goals.

The master teachers for HD2 were not fully operational during this grant year. The measurement of this objective can therefore not be fully made. However, it appears that HD1 master teachers did provide in excess of three days of job-embedded professional development. **This objective was therefore partially met.**

Objective 6a: By June of 2014, the MTs, Vertical Teams, and Grade Level Teams will design a webpage and publish a digital packet of all PD materials and resources developed for dissemination and replication.

The webpage was designed and implemented. It may be found at <http://www.hampton1.org/domain/633>. The digital packet is password protected. **This objective was met.**

Objective 6b: By July 30 of Years 2 and 3, the MTs, Vertical Teams, and Grade Level Teams will publish all new PD materials and resources developed for dissemination and replication to the digital packet.

To be completed in Years 2 and 3.

FINDINGS PART II: OUTCOME EVALUATION

The outcome objective and its performance measures are to be measured in the second and third year of the grant. Baseline and interim progress data are presented here for information.

Objective 7: Improved Student Achievement In Mathematics And Science

PERFORMANCE MEASURE

By June of Years 2 and 3, grade level attainment in math & science on state exams will improve by at least 3% annually compared to 2013-2014 baseline data to narrow the gap between HD1 and HD2 and state averages. By June of Years 2 and 3, grade level achievement in math and science on PASS will improve by at least 3% annually compared to the 2013 – 2014 baseline data to narrow the gap between HD1 and the state average. By June of Years 2 and 3, the percentage of students passing EOC exams in Algebra and Physical Science and HSAP math will increase by at least 3% compared to the 2013-2014 baseline data.

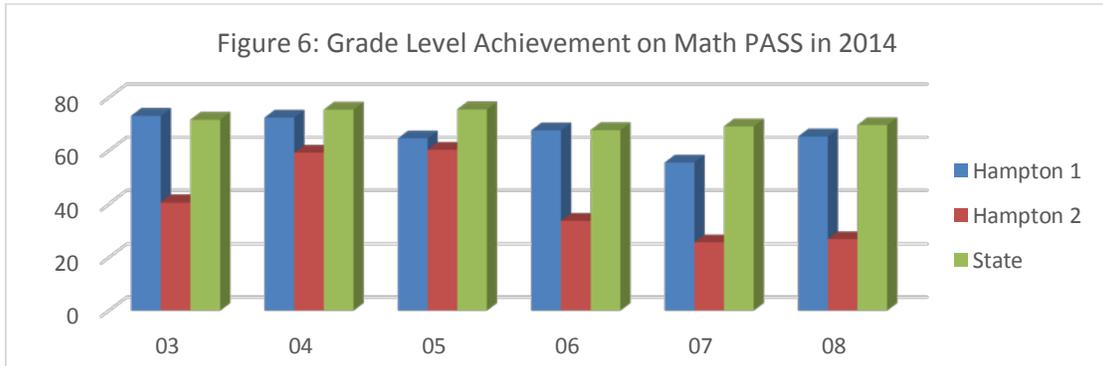
In 2013-2014, which is the baseline year for this grant, math PASS grade level achievement in HD1 was between 13.6 points under to 1.5 points over grade level achievement for the state. Math PASS grade level achievement in HD2 was between 43.4 points under to 15.2 points under grade level achievement for the state.

In particular, 73.1% of third graders in HD1 and 40.6% of third graders in HD2 scored met or above on the math PASS test, compared to 71.6% across the state. Amongst fourth graders, 72.4% in HD1 and 59.2% in HD2 scored met or above on the math PASS test, compared to 75.4% across the state. Amongst fifth graders, 64.6% in HD1 and 60.3% in HD2 scored met or above on the math PASS test, compared to 75.5% across the state. Amongst sixth graders, 67.6% in HD1 and 33.8% in HD2 scored met or above on the math PASS test, compared to 67.7% across the state. Amongst seventh graders, 55.5% in HD1 and 25.7% in HD2 scored met or above on the math PASS test, compared to 69.1% across the state. Amongst eighth graders, 65.3% in HD1 and 26.9% in HD2 scored met or above on the math PASS test, compared to 69.6% across the state.

A comparison of HD1's current grade level achievement to grade level achievement in 2009-2010 (the year prior to the district's first MSP grant) shows that grade level achievement has improved by 6.6 points for third graders, 2.2 points for fourth graders, 9.2 points for fifth graders, 6.3 points for sixth graders, and 7.4 points for eighth graders. Grade level achievement for seventh graders has declined by 2.7 points.

Table 6: Grade Level Achievement on Math PASS Test in 2014

	HD1		HD2		State	HD1 2009-2010	
	% Met or Above	Gap	% Met or Above	Gap	% Met or Above	% Met or Above	Diff
3rd Grade	73.1%	1.5	40.6%	-31.0	71.6%	66.5%	6.6
4th Grade	72.4%	-3.0	59.2%	-16.2	75.4%	70.2%	2.2
5th Grade	64.6%	-10.9	60.3%	-15.2	75.5%	55.4%	9.2
6th Grade	67.6%	-0.1	33.8%	-33.9	67.7%	61.3%	6.3
7th Grade	55.5%	-13.6	25.7%	-43.4	69.1%	58.2%	-2.7
8th Grade	65.3%	-4.3	26.9%	-42.7	69.6%	57.9%	7.4



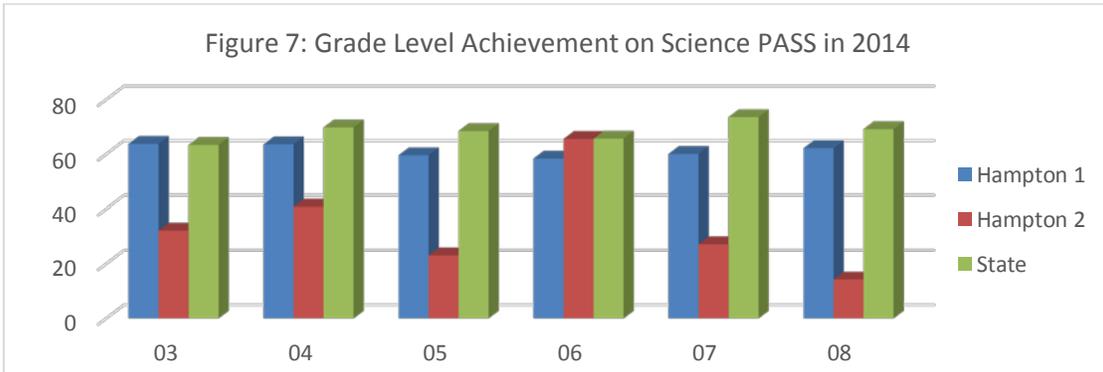
In 2013-2014, which is the baseline year for this grant, science PASS grade level achievement in HD1 was between 13.5 points under to 0.4 points over grade level achievement for the state. Science PASS grade level achievement in HD2 was between 54.9 points under to 0.1 points under grade level achievement for the state.

In particular, 63.8% of third graders in HD1 and 32.2% of third graders in HD2 scored met or above on the science PASS test, compared to 63.4% across the state. Amongst fourth graders, 63.6% in HD1 and 40.8% in HD2 scored met or above on the science PASS test, compared to 69.8% across the state. Amongst fifth graders, 59.6% in HD1 and 23.1% in HD2 scored met or above on the science PASS test, compared to 68.5% across the state. Amongst sixth graders, 58.4% in HD1 and 65.6% in HD2 scored met or above on the science PASS test, compared to 65.7% across the state. Amongst seventh graders, 60.1% in HD1 and 27.2% in HD2 scored met or above on the science PASS test, compared to 73.6% across the state. Amongst eighth graders, 62.2% in HD1 and 14.3% in HD2 scored met or above on the science PASS test, compared to 69.2% across the state.

A comparison of HD1’s current grade level achievement to grade level achievement in 2009-2010 (the year prior to the district’s first MSP grant) shows that grade level achievement has improved by 9.5 points for third graders, 2.9 points for fifth graders, 16.4 points for sixth graders, and 12.2 points for eighth graders. Grade level achievement for fourth graders has declined by a negligible 0.8 and achievement for seventh graders has declined by 14 points.

Table 7: Grade Level Achievement on Science PASS Test in 2014

	HD1		HD2		State	HD1 2009-2010	
	% Met or Above	Gap	% Met or Above	Gap	% Met or Above	% Met or Above	Diff
3rd Grade	63.8%	0.4	32.2%	-31.2	63.4%	54.3%	9.5
4th Grade	63.6%	-6.2	40.8%	-29	69.8%	64.4%	-0.8
5th Grade	59.6%	-8.9	23.1%	-45.4	68.5%	56.7%	2.9
6th Grade	58.4%	-7.3	65.6%	-0.1	65.7%	42.0%	16.4
7th Grade	60.1%	-13.5	27.2%	-46.4	73.6%	74.1%	-14
8th Grade	62.2%	-7	14.3%	-54.9	69.2%	50.0%	12.2



High school students in HD1 and 2 completed the state’s standardized end of year exam in math, the South Carolina High School Assessment Program (HSAP) and Algebra and Biology End of Course Exams (EOC). Passing grades for the EOC were scores of 70 or higher. Score categories on the HSAP ranged from 1 to 4. Students who met or exceeded examination requirements scored between a 2 to 4 and a student who scored a 1 was considered to have not met requirements.

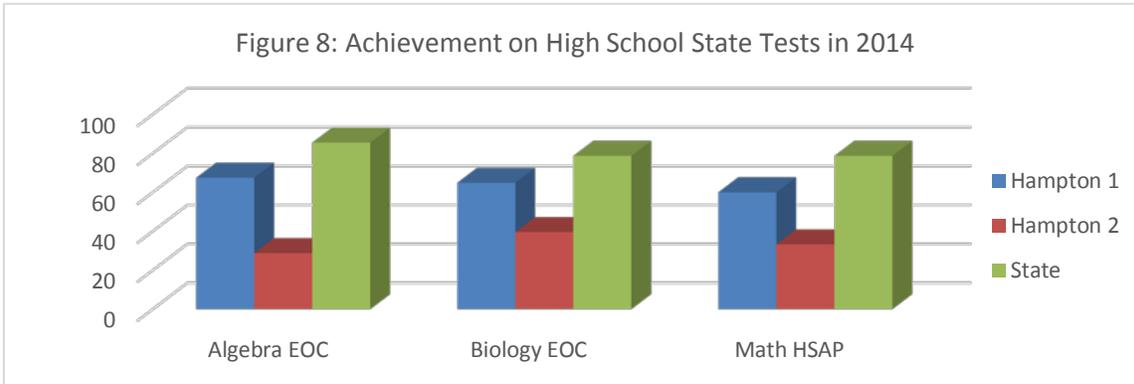
In 2013-2014, which is the baseline year for this grant, HD1 high school students’ achievement on state tests was between 13.8 points under to 18.7 points under achievement for the state. HD2 high school students’ achievement was between 56.7 points under to 39.1 points under achievement for the state.

In particular, 67.5% of test-takers in HD1 and 28.8% of test-takers in HD2 scored 70 or above on the algebra EOC exam, compared to 85.5% across the state. On the biology EOC, 64.9% in HD1 and 39.1% in HD2 scored 70 or above, compared to 78.7% across the state. On the math HSAP, 60% in HD1 and 33.3% in HD2 scored a 2 or above, compared to 78.7% across the state.

A comparison of HD1’s current achievement to achievement in 2009-2010 (the year prior to the district’s first MSP grant) shows that high school students’ rate of achievement has improved by 3.7 points on the algebra EOC and 39 points on the biology EOC. The percent of students achieving a 2 or better on the math HSAP has declined by 10.1 points.

Table 8: Achievement on High School State Tests in 2014

	HD1		HD2		State	HD1 2009-2010	
	% Met or Above	Gap	% Met or Above	Gap	% Met or Above	% Met or Above	Diff
Algebra EOC	67.5%	-18	28.8%	-56.7	85.5%	65.1%	2.4
Biology EOC	64.9%	-13.8	39.6%	-39.1	78.7%	46.7%	18.2
Math HSAP	60.0%	-18.7	33.3%	-45.4	78.7%	70.1%	-10.1



Impact of the Project on Student Achievement

During the first year of the evaluation, the baseline equivalence of the comparison group to the experimental group is measured to determine and prepare for any significant differences in teacher credentials, student demographics, and student academic achievement.

To begin, it must first be noted that the size of the districts are slightly different. HD1 serves approximately 2,400 students each year; whereas HD2 serves approximately 900 students and Bamberg District One (BD1) serves approximately 1,400. Both HD2 and BD1 have only three schools (one elementary, one middle, and one high school); whereas HD1 has seven primary and elementary schools, one middle and one high school.

HD1 is somewhat similar to BD1 in terms of teacher qualifications and district characteristics. Both districts have approximately the same proportion of returning teachers ($z=-1.024$, $p=0.472$), average teacher salary ($z=1.858$, $p=0.064$), and professional development days per teacher ($z=1.54$, $p=0.125$). BD1 has a slightly higher percentage of teachers with advanced degrees at 67.8%, compared to 61.8% in HD1, but the difference is not statistically different ($z=-0.947$, $p=0.509$). BD1 has a significantly higher student to teacher ratio in core subjects ($z=-2.357$, $p=0.019$) and spent approximately \$464 more per pupil ($z=-11.691$, $p<0.001$).

In terms of student demographics, BD1 has a racial makeup that is similar to HD1 (57.2% of students in HD1 and 59% in BD1 are minority - $z=-1.09$, $p=0.441$). However, HD1 has a larger proportion of students receiving free or reduced price meals (FRPM) ($z=4.191$, $p<0.001$), and thus also has a significantly higher poverty index ($z=2.027$, $p=0.043$). BD1 has a larger proportion of students with disabilities other than speech ($z=-5.013$, $p<0.001$).

HD2 is vastly different from HD1 and BD1 on many of the measures of teacher qualifications, district characteristics and student demographics, though tests of significance were not performed. In particular, HD1 has a much lower percentage of returning teachers (71.6%), lower average teacher salary (\$42,596), higher student to teacher ratio in core subjects (29.6 to 1), more dollars spent per pupil (\$13,560), greater proportion of students with disabilities other than speech (15.4%), greater proportion of minority students (98.4%), greater proportion of students receiving free or reduced price meals (90.6%), and higher rate of poverty (97.24). These differences make it difficult to use BD1 as a comparison for HD2, and therefore a different district should be sought out for comparison with HD2.

Table 9: Comparison of Teacher Qualifications, District Characteristics, and Student Demographics

	HD1		HD2		Bamberg 1		HD1-BD1	
	X	N	X	N	X	N	z/t	p
Advanced Degrees ¹	61.8%	170	60.0%	65	67.8%	87	-0.947 ^a	0.509
Returning Teachers ¹	88.7%	170	71.6%	65	92.7%	87	-1.024 ^a	0.472
Average Teacher Salary ¹	45498	170	42596	65	45398	87	1.858 ^b	0.064
PD Days/Teacher ¹	13.2	170	9.7	65	9.7	87	1.540 ^b	0.125
S:T Ratio Core ¹	16.4	170	29.6	65	20.7	87	-2.357 ^b	0.019
\$ Per Pupil ¹	9360	2383	13560	915	9824	1382	-11.691 ^b	<0.001
% Disabilities ¹	8.6%	2383	15.4%	915	13.8%	1382	-5.013 ^a	<0.001
% Minority ²	57.2%	2453	98.4%	873	59.0%	1407	-1.090 ^a	0.441
% FRPM ²	74.2%	2453	90.6%	873	67.9%	1407	4.191 ^a	0.000
Poverty Index ³	85.09	2453	97.24	873	77.64	1407	2.027 ^b	0.043

¹ Source: 2013 Annual Report Card. <http://ed.sc.gov/data/report-cards/2013/index.cfm>

² Source: 2013-2014 135-day head count. http://ed.sc.gov/data/student-counts/Student_Headcounts/ActiveStudentHeadcounts.cfm

³ Source: 2013 SC Poverty Index Data File. http://ed.sc.gov/data/report-cards/2013/documents/2013_Report_Card_Poverty_Index.xls

^a Test of significance is based on the Normal approximation to the binomial distribution and is calculated using the z value.

^b Test of significance is calculated using the pooled two-sample t procedure. Variance for the x statistics within each school was unknown. The variance for all districts in the state was calculated using the data sources described above and substituted as a proxy measure of variance.

Overall, the proportion of students in HD1 who scored met or above on the math PASS (66.5%) is similar to the proportion in BD1 (64.3%) ($z=-0.547$, $p=0.687$). In contrast, only 39.4% of students in HD2 scored met or above. Grade level achievement on the math PASS in 2014 is similar for BD1 as for HD1, except in third grade ($z=3.016$, $p=0.008$) and seventh grade ($z=-4.412$, $p<0.001$). In HD1, 73.1% of third graders scored met or above compared to 55.8% of third graders in BD1, and 55.5% of seventh graders in HD1 scored met or above compared to 80.8% of seventh graders in BD1.

The proportion of HD2 students in each grade level who scored met or above is smaller than the proportion in the other two districts except in fifth grade, where the proportion was similar. In HD2, 60.3% of fifth graders scored met or above, which is similar to the 64.6% in HD1 and 63.8% in BD1. Tests of significance for BD2 were not performed due to the large differences in baseline characteristics for this district.

Table 10: Comparison of Grade Level Achievement on Math PASS Test in 2014

	HD1		HD2		Bamberg 1		HD1-BD1	
	%Met or Above	N	%Met or Above	N	%Met or Above	N	<i>z</i> ^a	<i>p</i>
3rd Grade	73.1%	190	40.6%	59	55.8%	104	3.016	0.008
4th Grade	72.4%	170	59.2%	49	75.9%	91	-0.611	0.662
5th Grade	64.6%	178	60.3%	53	63.8%	113	0.139	0.790
6th Grade	67.6%	191	33.8%	65	66.7%	99	0.155	0.788
7th Grade	55.5%	173	25.7%	70	80.8%	114	-4.412	<0.001
8th Grade	65.3%	190	26.9%	67	64.3%	115	0.177	0.785
Total	66.5%	1092	39.4%	363	67.8%	636	-0.547	0.687

^a Test of significance is based on the Normal approximation to the binomial distribution and is calculated using the *z* value.

Overall, the proportion of students in HD1 who scored met or above on the science PASS (61.4%) is significantly less than the proportion in BD1 (71.6%) ($z=-3.483, p=0.002$). However, grade level achievement on the science PASS in 2014 is statistically similar for BD1 as for HD1 in all grade levels, though the percentage of HD1 students in grades 4 through 8 who scored met or above is smaller than the percentage of BD1 students in these grades. These minor grade level differences are what constitute the significant difference overall.

In contrast, only 33.3% of students in HD2 scored met or above. The proportion of HD2 students in each grade level who scored met or above is smaller than the proportion in the other two districts except in sixth grade, where the proportion was similar. In HD2, 65.6% of sixth graders scored met or above, which is greater than the 58.4% in HD1 and less than the 76% in BD1. Tests of significance for BD2 were not performed due to the large differences in baseline characteristics for this district.

Table 11: Comparison of Grade Level Achievement on Science PASS Test in 2014

	HD1		HD2		Bamberg 1		HD1-BD1	
	%Met or Above	N	%Met or Above	N	%Met or Above	N	<i>z</i> ^a	<i>p</i>
3rd Grade	63.8%	94	32.2%	31	59.6%	52	0.502	0.704
4th Grade	63.6%	170	40.8%	49	77.0%	91	-2.215	0.069
5th Grade	59.6%	89	23.1%	26	68.4%	57	-1.074	0.448
6th Grade	58.4%	96	65.6%	32	76.0%	50	-2.107	0.087
7th Grade	60.1%	173	27.2%	70	72.8%	114	-2.210	0.069
8th Grade	62.2%	98	14.3%	35	70.7%	58	-1.078	0.446
Total	61.4%	720	33.3%	243	71.6%	422	-3.483	0.002

^a Test of significance is based on the Normal approximation to the binomial distribution and is calculated using the *z* value.

On all three high school tests, a significantly smaller proportion of HD1 students met or exceeded the examination requirements than did BD1 students. On the Algebra EOC, 67.5% of HD1 students scored 70 or better on the exam, compared to 88.3% of BD1 students ($z=-4.114$,

$p < 0.001$). On the Biology EOC, 64.9% of HD1 students scored 70 or better on the exam, compared to 89.5% of BD1 students ($z = -4.163$, $p < 0.001$). On the Math HSAP, 60% of HD1 students scored 2 or better on the exam, compared to 79% of BD1 students ($z = -3.006$, $p = 0.009$). A much smaller percentage of students in HD2 met or exceeded the examination requirements than did HD1 or BD1 students; however, tests of significance were not performed.

Table 12: Comparison of Achievement on High School State Tests in 2014

	HD1		HD2		Bamberg 1		HD1-BD1	
	%Met or Above	N	%Met or Above	N	%Met or Above	N	z^a	p
Algebra EOC	67.5%	178	28.8%	59	88.3%	120	-4.114	<0.001
Biology EOC	64.9%	157	39.6%	58	89.5%	86	-4.163	<0.001
Math HSAP	60.0%	185	33.3%	60	79.0%	81	-3.006	0.009

^a Test of significance is based on the Normal approximation to the binomial distribution and is calculated using the z value.

Impact of the Project on Teacher Practices

Increased Content Knowledge

The math content knowledge assessment was administered to teachers using the Study Island software in August of each year. The 89 teachers who completed the math pre and post test scored an average of 87.57 on the pre-test and an average of 93.06 on the post test. The average difference of 5.48 points is statistically significant ($t = 7.124$, $df = 88$, $p < 0.001$). Therefore, teachers in HD1 and HD2 significantly improved their math content knowledge during the grant year.

The science content knowledge assessment was also administered to teachers using the Study Island software in August of each year. The 24 teachers who completed the science pre and post test scored an average of 82.25 on the pre-test and an average of 92.88 on the post test. The average difference of 10.63 points is statistically significant ($t = 4.55$, $df = 23$, $p < 0.001$). Therefore, teachers in HD1 and HD2 significantly improved their science content knowledge during the grant year.

Use of Endorsed Pedagogical Practices

Use of endorsed pedagogical practices was measured using a six question survey of master teachers and administrators who observed classroom teachers. The survey was completed by master teachers in HD1. Master teachers in HD2 did not complete the survey in this grant year. The survey was completed by master teachers at their discretion; therefore, the time between the pre-survey and the post-survey varies by teacher. For each item, the master teacher was instructed to rate the teacher on a scale of 1 to 5, where 1 equals not at all and 5 equals all the time.

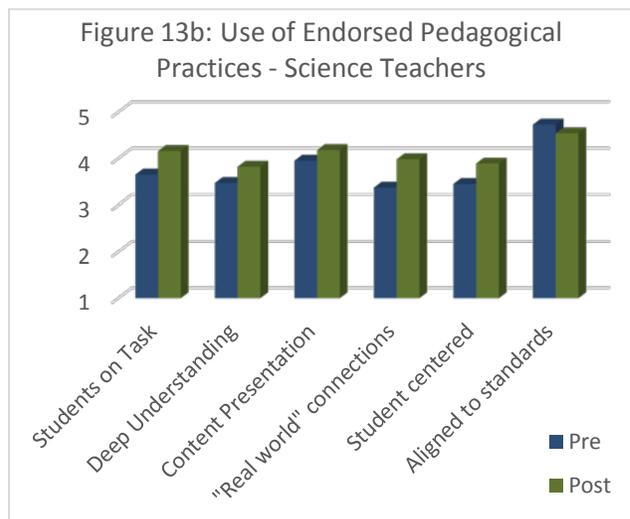
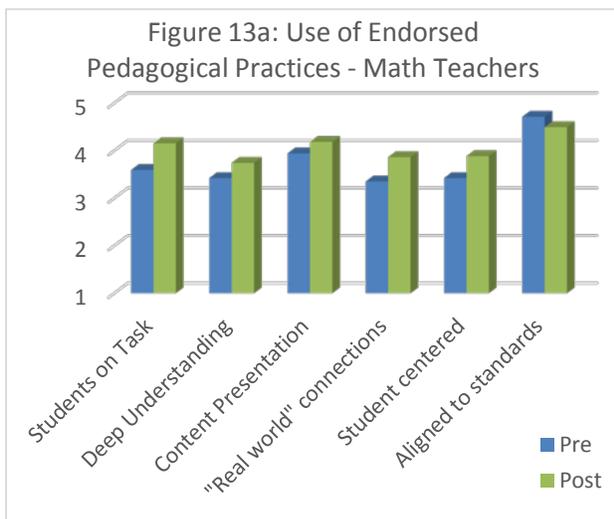
For math teachers, observation data shows significant improvement in the use of endorsed pedagogical practices. At the pre-assessment, student involvement was between sometimes and

often (mean=3.59, n=66, sd=0.8) and at the post-assessment, student involvement was slightly better than often (mean=4.15, n=66, sd=0.68), which is a statistically significant improvement ($t=6.91$, $df=65$, $p<0.001$). Teachers improved in their ability to foster deep conceptual understanding by an average of 0.32 points ($t=4.62$, $df=65$, $p<0.001$), present content accurately and fluidly by 0.24 points ($t=2.8$, $df=65$, $p=0.007$), make connections to the real world by 0.52 points ($t=6.3$, $df=65$, $p<0.001$), and provide student-centered instruction by 0.46 points ($t=6.06$, $df=64$, $p<0.001$). The observations did note a significant average decline of 0.22 points in instruction that was aligned to current academic standards ($t=-2.12$, $df=64$, $p=0.038$).

For science teachers, observation data shows significant improvement in the use of endorsed pedagogical practices. Student involvement improved from sometimes (mean=3.65, n=57, sd=0.79) to slightly better than often (mean=4.16, n=57, sd=0.68), which is a statistically significant improvement ($t=5.84$, $df=56$, $p<0.001$). Teachers improved in their ability to foster deep conceptual understanding by an average of 0.35 points ($t=4.81$, $df=56$, $p<0.001$), present content accurately and fluidly by 0.23 points ($t=2.21$, $df=56$, $p=0.031$), make connections to the real world by 0.51 points ($t=5.84$, $df=56$, $p<0.001$), and provide student-centered instruction by 0.45 points ($t=5.3$, $df=55$, $p<0.001$). Observers noted an average decline of 0.2 points in instruction that was aligned to current academic standards, however, the difference is not statistically significant ($t=-1.8$, $df=55$, $p=0.078$).

Table 13: Change in Use of Endorsed Pedagogical Practices

	Math Teachers			Science Teachers		
	Pre	Post	p	Pre	Post	p
The students were on task and involved	3.59	4.15	<0.001	3.65	4.16	<0.001
The teacher fostered deep conceptual understanding	3.42	3.74	<0.001	3.47	3.82	<0.001
Content was presented accurately and fluidly	3.94	4.18	0.007	3.95	4.18	0.031
Connections were made to the "real world"	3.35	3.86	<0.001	3.37	3.98	<0.001
Instruction was student centered	3.42	3.88	<0.001	3.45	3.89	<0.001
Instruction was aligned to current academic standards	4.71	4.49	0.038	4.73	4.54	0.078



FINDINGS PART III: GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

This section reports on the federal Government Performance and Results Act (GPRA) measures established for this grant. The results of measurements are reported and variances discussed.

GPRA Measure 1: Teacher Content Knowledge

The specific GPRA measure is “the percentage of teachers who significantly increase their content knowledge in mathematics and science, as reflected in project-level pre- and post-assessments.”

Teacher content knowledge in math was measured using the Study Island software. Study Island software has been purchased by the school district for use by students as an additional instructional tool. Teachers were instructed to complete the module that is two grade levels above and in the same subject which they teach. On the pre-test, teachers who had achieved mastery of a grade level in the previous year were instructed to take the test for the next grade level, so that by the third year of the grant, many teachers will be taking tests several grade levels above the grade level taught. Teachers completed the same test for both the pre-assessment and the post-assessment. Of the 113 math and science teachers who completed the pre- and post-content knowledge assessment, 89 (78.8%) completed a math module of Study Island and 24 (21.2%) completed a science module of Study Island.

The electronic spreadsheet supplied by the MSP federal program office was used to determine the number of teachers who showed significant gains in math and science content knowledge. This spreadsheet uses a “dependent t-test (for 30 or more respondents) or the Wilcoxon signed ranks test (for less than 30 respondents) to calculate, with 85 percent certainty, the number of teachers who showed significant gains”.

Of the 119 teachers who participated in professional development opportunities, 113 participated in at least one of the courses that provided math content (a total of 319 participations). Eighty nine of these teachers completed both the pre-test and the post-test on math content knowledge. Teachers with an improvement of four points or more from the pre-test to the post-test were considered to have made a significant improvement ($t=7.124$, $p<0.001$). Of these 89, 54 (60.7%) achieved significant gains in math content knowledge from the pre-test to the post-test. Five teachers achieved a score of 100 on both the pre-test and the post-test.

One hundred and three teachers participated in at least one of the courses that provided science content (a total of 212 participations). Twenty-four teachers completed both the pre-test and the post-test on science content knowledge. Teachers with an improvement of five points or more from the pre-test to the post-test were considered to have made a significant improvement ($W=3.61$, $p=0.0002$). Of these 24, 16 (66.7%) achieved significant gains in science content knowledge from the pre-test to the post-test. One teacher achieved a score of 100 on both the pre-test and the post-test.

GPRA Measure 2: Students at the Basic Level or Below in State Assessments of Mathematics or Science

The specific GPRA measure is “The percentage of students in classrooms of MSP teachers who score at the basic level or above in State assessments of mathematics or science.”

The project is designed to serve all math and science teachers in the schools within Hampton School Districts One or Two. Therefore, all students in the districts should be impacted. During the 2013-2014 school year, there were approximately 2,453 students enrolled in school in HD1 and 873 enrolled in HD2, for a combined total of 3,326 students impacted.

Of the 1,455 who completed the Math PASS test in 2014, 586 (40.3%) scored not met. Of the 245 who completed the math portion of the HSAP, 114 (46.5%) had not met the examination requirements for a high school diploma. Of the 237 who completed the Algebra End-of-Course (EOC) test, 100 (42.2%) did not pass the test (scored less than 70 points).

Of the 963 who completed the Science PASS test in 2013, 440 (45.7%) scored not met. Of the 215 who completed the Biology End-of-Course (EOC) test, 97 (45.1%) did not pass the test (scored less than 70 points).

GPRA Measure 3: Students at the Proficient Level or Above in State Assessments of Mathematics or Science

The specific GPRA measure is “The percentage of students in classrooms of MSP teachers who score at the proficient level or above in State assessments of mathematics or science.”

The project is designed to serve all math and science teachers in the schools within Hampton School Districts One and Two. Therefore, all students in the districts should be impacted. During the 2013-2014 school year, there were approximately 2,453 students enrolled in school in HD1 and 873 enrolled in HD2, for a combined total of 3,326 students impacted.

Of the 1,455 who completed the Math PASS test, 869 (59.7%) scored met or exemplary. Of the 245 who completed the math portion of the HSAP, 131 (53.5%) met the examination requirements for a high school diploma. Of the 215 who completed the Algebra End-of-Course (EOC) test, 137 (57.8%) passed the test (scored 70 points or more).

Of the 963 who completed the Science PASS test, 523 (54.3%) scored met or exemplary. Of the 215 who completed the Biology End-of-Course (EOC) test, 118 (54.9%) passed the test (scored 70 points or more).

GPRA Measure 4: Experimental or Quasi-Experimental Evaluation Design

The specific GPRA measure is “The percentage of MSP projects that report using experimental or quasi-experimental design for their evaluations.”

The **outcome evaluation design** is quasi-experimental. The experimental group consists of four subgroups: HD1 MTs and math/science teachers and HD2 MTs and math/science teachers. Each district will identify these teachers and make annual adjustments as needed. Because the project serves all of the math and science teachers in Hampton Districts One and Two, the quasi-experimental design requires comparison to teachers in another district. Bamberg District One was selected as a comparison group due to its proximity and similarity to HD1. The suitability of this district as a comparison group was examined during the 2013-2014 evaluation. It was determined that Bamberg District One is a suitable comparison for HD1; however, a second comparison group will need to be selected for HD2.

In the second and third years, after the teachers have had the opportunity to implement what they have learned, the effect of each PD activity will be examined by comparing changes in teacher content and pedagogy knowledge, and student achievement among each group of teachers. Regression statistics will be used to account for differences in student demographics and teacher credentials and to measure the significance of the relationship. The evaluation will include an analysis of the achievement rates of HD1, HD2, and Bamberg students accounting for differences in staff characteristics, advanced degrees, and PD days to determine if differences in student achievement are greater than normal.

GPRA Measure 5: Scientifically Valid Evaluation Results

The specific GPRA measure is “The percentage of MSP projects that use experimental or quasi-experimental design for their evaluations that are conducted successfully and that yield scientifically valid results.”

The evaluation conducted for the 2013-2014 grant year is the first year evaluation of a three year grant. The evaluation has set up the study to measure the impact of the project in a scientifically valid manner, and the impact will be measured in this way in years 2 and 3. The evaluation for 2013-2014 therefore does not meet the federal definition of having a successful experimental or quasi-experimental design that yields scientifically valid results. Nevertheless, efforts are being made to collect data in such a way that it may be used in years 2 and 3 for conducting an evaluation with a quasi-experimental design that yields scientifically valid results.

CONCLUSIONS

1. The process performance measures of the grant were met or exceeded
2. Baselines for the outcome performance measures of the grant were established
3. Teachers significantly improved both their content knowledge and use of endorsed pedagogical practices
4. The project has been well administered
5. The Master Teachers and classroom teachers are enthusiastic about the TEAMS
6. The TEAMS concept is being rapidly integrated into the Districts' cultures

RECOMMENDATIONS

1. That a school district which is closer to HD2's demographics and student achievement be identified for use in the outcome evaluation
2. That methods be found for obtaining individualized student data for comparison purposes
3. That the Districts continue to strongly support the MSP project.

**APPENDIX ONE:
INTERVIEW INSTRUMENTS**

2014 Hampton MSP Interview Master Teachers

Date _____ SWS staff _____

Master Teacher Name _____

1. How has the program progressed over the last year?
2. How has your schedule changed over the last year?
3. What is a typical week like for you as a MT?
4. What are you now doing in directly working with classroom teachers one-on-one?

9. How have things changed for the teachers you work with since the program began?

10. How have things changed for your school(s) since the program began?

11. How have things changed for the district since the program began?

12. How have things changed for you since the program began?

**APPENDIX TWO:
MASTER TEACHER MEETING AGENDAS**

I. 8:00-9:50 – MSP Cycle 2

A. Review proposal

1. Supply money
2. Lunches during district PD and Summer Institutes

B. TAP/MSP Master Teachers and TAP Mentor/MSP Teachers

1. Responsibilities
2. Schedules
3. Release Time
4. PD beyond school hours

II. 9:50-10:05 – CCSS Implementation Plan

- A. Development of Leadership through Vertical Teams
- B. Development of Leadership through SIT-CCSS
- C. Consistent Understanding of Content Contained in the CCSS
- D. Monitoring of Classroom Practices
- E. Monitoring of Assessment – Backwards Design

III. 10:05-11:05 – Envision and Digits

IV. 9:50-11:05 - Break as needed

V. 11:05 – 11:45 – SIT-CCSS Initial Meeting

A. Scheduled Dates

1. September 11 – WHHS – M. Long and B. French
2. September 11 – HES – R. Phillips, T. Stansfield, and S. Padgett

3. **September 11 – FES – V. Salisbury and A. Walker**
4. **September 11 – BES – R. Taylor, M. Cope, and T. Wright**
5. **TBD – BHPS – J. Huber and M. Cope??**
6. **TBD – VES – D. Smith and B. Peeples ??**
7. **TBD – NDMS – D. Stuckey and B. French**

B. What are the questions that must be answered by the strategic plan?

1. **In terms of team structure, protocols, and needs**
2. **In terms of scheduled meetings and setting agendas**
3. **In terms of chair and recorder responsibilities**
4. **In terms of who is at the table**
5. **In terms of understanding content and expected practices**
6. **In terms of monitoring classroom content, practices, and assessments**

VI. 11:45 -12:45 – Lunch

VII. 12:45-1:15 – Breakout – Agenda drafts

VIII.1:15-1:45 – Consensus Draft

IX. 1:45-2:45 – CCSS Updates and Smarter Balanced Assessments

X. 2:45-3:30 – Where Are We?

- A. **Pacing Guides**
- B. **DCAs and Benchmarks**
- C. **Needs**
- D. **Questions**

Master Teacher Meeting Agenda

10/18/2013

Notes:

HD1 Master Teachers, please bring your

- a. pacing guides,
- b. a copy of each level of the Envision Math Texts,
- c. a copy of your assigned school's SIT strategic plan and minutes from the last meeting
- d. and iPads or laptops.

HD2 Master Teachers, please bring your laptops and copies of your pacing guides and math texts also.

We can no longer pay for lunches with Federal dollars. Please bring \$8.00 exact change for your lunch from Coconuts or bring your own lunch. A menu will be provided for you to make your selection from Coconuts.

8:00-9:30 Master Teachers –

1. Introduction of new HD2 Master Teachers
2. Assign mentors to HD2 Master Teachers
3. Discussion of Professional Development Opportunities
 - a. Citadel – Graduate Credit in Masters of STEM Ed
 - b. USC – Aiken – Content Development TBD

- c. Algebrige – Continuation of Ratio and Proportion PD (12 hours); Other 48 hours?
 - d. Invent Now – Initial Professional development on January 17 (8 hours), past teachers will lead PD for this year's teachers between January and June (20 hours – February and March SD), new teachers will teach modules during 1 week of the summer program during June or July (32).
 - e. Teacher Toolbox Project-based Learning – Anita Padgett throughout the year (Nov. 5, 12, 19, 25, Dec. 3, 5, 10, 17, in the Media Center at VES from 3:30-7:30). Participants will be rewarded 60 renewal/technology credits upon successful completion of a PBL lesson targeting all four subject areas. Sign in at www.hampton1.org , click on the calendar, and choose the PBL Course event on Nov. 5th to register.
 - f. S²TEM Center – Cognitive Coaching (December); Leadership Training for SITs and MTs (November SD and as scheduled)
 - g. Approved graduate studies
4. New Action Plan Template

9:30-10:30 Master Teachers and DIT Members –

1. CCSS Updates
2. Review of SIT plans
3. Development of MT Action Plans

10:30 Break

10:45-11:45 –

1. Assessment Updates
2. Writing a test item

11:45-12:15 Lunch

12:15-1:15 –

1. Review of teachers, teaching assignments, and MT assignments
2. To do list:
 - a. Brochure of PD
 - b. Development of Digital Professional Packet
 - c. Fraction Units
 - d. Revision of DCAs, Benchmarks?
 - e. Algebridge Design

1:15-3:15 –

Working Groups - Correlation of texts to pacing guides

3:15-3:30 –

Wrap-up

Master Teacher Meeting Agenda 11/15/2013

Notes:

HD1 Master Teachers, please bring your

- a. pacing guides
- b. a copy of all DCAs
- c. a copy of your assigned school's SIT strategic plan
- d. and iPads or laptops.

HD2 Master Teachers, please bring your laptops and copies of your pacing guides.

We can no longer pay for lunches with Federal dollars. Please bring \$8.00 exact change for your lunch from Coconuts or bring your own lunch. A menu will be provided for you to make your selection from Coconuts. If you are not ordering lunch from Coconuts, please bring your own lunch when you come.

8:00-8:30 Schoolwires Calendar – Dr. Carole McGrath

8:30-8:45 Introduction of new HD1 Master Teachers

BES – Terry Wright and Tracy Preston

BHP - Julie Huber (TAP) and Diane Stanley

HES – Rachael Phillips, Terri Stansfield, and Anthrow Roberts

VES – Dawn Smith and Robin Taylor

FES – Violet Salisbury (TAP) and Saidell Moore

NDMS – Dawn Stuckey (TAP) and Jacqueline Smith

WHHS – Mysti Long (TAP) and Jacqueline Smith

8:45-9:45 District Implementation Plan – Integration of District Plan and MSP grant and TAP

Needs assessment

9:45-10:00 Break

10:00-10:30 Assessment Update

10:30-11:45 Pacing Guides, DCAs, and Benchmark Testing

- Progression Documents
- Pacing Guides and textbook correlation
- DCAs
 1. Administer 1st and 2nd DCAs December 11-13
 2. Complete scoring and data collection by December 20
 3. SITs analyze results at January meeting, revisit strategic plan for EBDM (Evidence-based Decision Making)
- Breakout Groups - Benchmarks – 2 parts – MC and varied response type
 1. E-mail copies to Rhonda by December 13
 2. Teams
 - K-2 Tracy, Julie, Dawn Smith, Violet, Diane
 - 3-5 Marsha Robinson, Terry Wright, Rachael, Terri Stansfield, and Robin
 - 6-8, 9 (Alg EOC) Saidell, Dawn Stuckey, Anthrown, Mysti, Sarah Williams, Chitra Mahajani, and Jacqueline

11:45-12:00 To do list:

- a. Pre-tests completed and Action Plans Submitted to Mrs. Willis by December 6; PD registration completed by all teachers by December 13
- b. Brochure of PD and Parent Brochure - Mysti Long, chair Due date January 17; Sent home January 23
- c. Development of Digital Professional Packet – Due January 17
- d. Fraction Units PD – Due January 17
- e. Algebra Crossings Design – Mysti Long, chair Due January 17
- f. Inquiry Learning PD plan – Due January 17

12:00-12:45 Lunch

12:45 – 3:00 Literacy Standards for Content Areas – Betty French

3:00 – 3:30 Wrap-up

Master Teacher Meeting

December 11, 2013

3:15-5:15 PM

Wade Hampton High School

- I. Technology Hour 3:15-4:15 Anita Padgett
- II. Legislative Updates 4:15-4:30 Rhonda Willis
 - a. EOC Meeting December 9, 2013
 - b. Edmodo join bvq9g4
 - c. Pages 6, 11, and 23
 - d. High School Level HSAP replaced with dual credit testing
 - e. 3-8 summative assessments
 - f. Grade 3 ELA and Math
 - g. 4-8 all subjects equally weighted on ESEA report
- III. Summary of SBAC testing 4:30-4:45
- IV. Grade 3-5 resources
- V. Updates 4:45-5:15 Master teacher reports
 - a. DCA Update
 - b. Action Plan Update
 - c. Pre-test Update
 - d. Benchmark Update
- VI. Closing comments

January 31, 2014

Master Teacher Meeting

Hampton Methodist Church Annex

Don't forget to bring your lunch or go online to order your lunch from Coconuts. Please bring \$8.00 (correct change) with you Friday if you order from Coconuts.

- | | | |
|------|--|---------------|
| I. | Technology Integration – Anita Padgett | 8:00 – 10:00 |
| II. | Break | 10:00 - 10:15 |
| III. | CCSS and Assessment | 10:15 - 11:30 |
| IV. | Lunch | 11:30 – 12:00 |
| V. | Break-out Working Session | 12:00 - 3:15 |
| | A. DCA Revision (HD1 Master Teachers only) | |
| | B. ELA Common Assessments (HD1 Grade Band Leaders) | |
| VI. | Wrap-up and Comments | 3:15 – 3:30 |

Master Teacher Meeting Agenda 02/21/2014

Notes: HD1 Master Teachers, please bring your

- a. your copy of the Science Frameworks
- b. a copy of all DCAs
- c. and iPads or laptops.

HD2 Master Teachers, please bring your laptops and any common assessments you have developed.

We can no longer pay for lunches with Federal dollars. Please bring \$8.00 exact change for your lunch from Coconuts or bring your own lunch. A menu will be provided for you to make your selection from Coconuts. If you are not ordering lunch from Coconuts, please bring your own lunch when you come.

8:00-10:00 PBL and iPad Apps – Anita Padgett

10:00-10:15 Break

10:15-11:00 Progress Monitoring - Rhonda Willis

- DCA report from each grade level
- Benchmark report for each grade level and Next Steps
- Algebra Crossings schedule – Mysti Long
- Inquiry Learning (Camp and Club Invention) schedule – Diane Stanley
- Parent Brochure
- PD Brochure
- Professional Digital Package
- SITs and Grade-Level meetings

11:00 -12:00 Science Frameworks and SC Science Standards – S²TEM Center

12:00-12:30 Lunch

12:30-3:30 Science Frameworks and SC Science Standards – S²TEM Center

Master Teacher Meeting Agenda 03/21/2014

Notes: HD1 Master Teachers, please bring your

- a. your copy of the Science Frameworks
- b. and iPads or laptops.

We can no longer pay for lunches with Federal dollars. Please bring \$8.00 exact change for your lunch from Coconuts or bring your own lunch. A menu will be provided for you to make your selection from Coconuts. If you are not ordering lunch from Coconuts, please bring your own lunch when you come.

8:00-10:00 Technology and PBL update – Anita Padgett

10:00-10:10 Break

10:10-10:30 Progress Monitoring - Rhonda Willis

- DCA report from each grade level
- Benchmark report for each grade level and Next Steps
- Algebra Crossings update – Mysti Long
- Inquiry Learning (Camp and Club Invention) update – Diane Stanley
- PD Brochure
- Summer planning

10:30 -12:00 Science Frameworks and SC Science Standards – S²TEM Center

12:00-12:45 Lunch

12:45-3:30 Science Frameworks and SC Science Standards – S²TEM Center

Master Teacher Meeting Agenda with Minutes 04/25/2014

Notes: HD1 Master Teachers, please bring

- a. your copy of the Science Frameworks
- b. and iPads or laptops.

We can no longer pay for lunches with Federal dollars. Please bring exact change for your lunch from Coconuts or bring your own lunch. A menu will be provided for you to make your selection from Coconuts. If you are not ordering lunch from Coconuts, please bring your own lunch when you come.

8:00-10:00 Technology update – Anita Padgett

10:00-10:10 Break

10:10-10:30 Progress Monitoring - Rhonda Willis

- DCA Deadline for all grades 05/15/2014
- Benchmark report for each grade level and next steps
- Algebra Crossings update – Mysti Long
- Inquiry Learning (Camp and Club Invention) update – Diane Stanley
- PD Brochure update
- Resources for grades 3,4, and 5 (Please bring your laptop or external drive. The file is too big to e-mail to you.)
- Fractions Website to watch <http://www.intensiveintervention.org/resources/sample-lessons-activities/mathematics>

10:30 -12:00 Science Frameworks and SC Science Standards – S²TEM Center

What are disciplinary core ideas? Life, Physical and Earth and Space Science

Uncovering Student Ideas in Science by Page Keely, Francis Eberle, and Chad Dorsey

Shared video on YouTube of balloon in van to demonstrate science concepts

<http://pbskids.org/designsquad/parentseducators/workshop/activity.html>

12:00-12:45 Lunch

12:45-3:30 Science Frameworks and SC Science Standards – S2TEM Center continued.

Master Teacher Meeting Agenda 08/11/2014

Notes: Please bring your

- a. Your laptop or iPad to access the MSP Gems system
- b. A copy of all TAP observation records for the Science, Math, and Math/Science Special Education Teachers in your school. If a TAP Master Teacher in your school will be attending this meeting, you can access the records online when you come. If you have kept other coaching records this year, please bring those as well. (Mrs. Long and Mrs. Smith, I have a copy of all of NDMS's observations and will bring them to the meeting for you.)
- c. Your calendars

We can no longer pay for lunches with Federal dollars. A menu will be provided for you to make your selection from Coconuts. If you are not ordering lunch from Coconuts, please bring your own lunch when you come.

9:00-9:30 Science Standards – Courtney Cook

9:30 – 10:00 – Children of Poverty and Habits of Mind – Diane Stanley

10:00-10:30 – Foldables – Terri Stansfield

10:30-11:45 – Housekeeping and Updates - Rhonda Willis

- a. Standards Update
- b. Confirm Teacher's PD List
- c. Student/teacher Surveys
- d. 2013-14 Action Plans with Reflections
- e. 2014-15 Action Plans/Pre-tests completed **by September 15, 2014**
- f. 2014-15 Focus Standards- Coaching-PD
- g. Science and Math Kit Institutes
- h. 2014-15 MT Calendar of Monthly Meetings
- i. GEMS Coaching Logs

11:45-12:15 Lunch

12:15-3:00 – Complete Coaching Logs in GEMS

**APPENDIX THREE:
SAMPLE OF TEACHER ACTION PLAN**

Individual Growth Plan/ Math Science Initiative Action Plan

Year: _____ 2013-14 _____

Grade/ Subjects: _____ Second/all subjects _____

Teacher Name: _____

Assigned Master Teacher: _____

School Goal: To be determined.			
Personal Learning Focus: math			
Individual Growth Goal: By the end of SY 2013-14, I will increase my content knowledge of the CCSS by at least 3% as measured by assessments completed in Study Island.			
Instructional Goal: By the end of SY2013-14, students' MAP scores will increase at least 3% as a result of student engagement in problem based scenarios and performance tasks.			
Identified Need/Rationale:			
<ul style="list-style-type: none"> Pre-test score: 93% Personal TAP Data (<i>Refinement/ Reinforcement</i>): to be determined Student Achievement Data: to be determined 			
Professional Development:			
Year 1: 2013-14	Year 2: 2014-15	Year 3: 2015-16	
<ul style="list-style-type: none"> Study Island PBL 	<ul style="list-style-type: none"> Study Island Invent Now 	<ul style="list-style-type: none"> Study Island S2TEM Center 	
Impact on classroom (<i>What are the changes you will see in your classroom?</i>)			
<ul style="list-style-type: none"> For Year 1, I expect to see students more engaged in learning by making it meaningful by developing learning experiences where inquiry, curiosity or exploration is valued. 			
Activity/Classroom Outcome	Follow-Up/Evidence	Implementation <i>(Strategies from Cluster or Research-based best practices)</i>	Initial
<ul style="list-style-type: none"> Performance Tasks/80% Mastery of Authentic 	 <ul style="list-style-type: none"> Need: To provide a more complete picture of student achievement. Learn: I Do: Students are given real world examples and teacher models how she is thinking and expectations. Develop: We Do: Teachers prompt, question, facilitate, or lead students through tasks that increase their understanding of content. Students problem solve, discuss, negotiate, and think with peers. Apply: You Do: Students practice with applying information in new ways. Students synthesize information, transform ideas, and solidify their understanding. 	<ul style="list-style-type: none"> PBL Gradual Release Model 	
Reflection: The PBL Course has been a great advantage in my teaching. It has allowed me to use even more technology strategies and ideas to use in my classroom. My students have become more engaged in their class tasks using technology with partners or independently. Students are more engaged and completing performance-based activities.			
Post-test 93.5			

**APPENDIX FOUR:
TRAINING PROVIDED**

Grantee: Hampton School District 1
Grant: Math and Science Partnership Grant - 2013 - ID#7
All Trainings

Report on Trainings Provided - Grant Year: 2014

Updated as of 10/14/2014

Middle and High School Standards Support

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 3/12/2010 - 7/24/2014

Professional development created to support mathematics teachers of grades 5-HS.

Algebra Connections

Number of Contact Hours: 60		Training Dates: 3/12/2014 - 6/5/2014	
Course Description:	Participants studied the content of mathematical standards and the vertical alignment of concepts across grades. Teachers engaged in activities as students to increase their conceptual knowledge and then developed activities to teach a specific standard conceptually to their students during the next school year.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Problem Solving 		
Science Topics Covered			
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Served as the Service Site • Provided Supplies, Materials or Meals • <i>MT Long:</i> Led Instruction/Training, Assisted in the Planning of the Training, 		

PBL - Solar Energy and Rocketry

Number of Contact Hours: 60		Training Dates: 4/29/2014 - 7/24/2014	
Course Description:	Participants developed PBL units addressing the issues of developing alternative energy sources, specifically solar energy, and analyzing the physics and chemistry of rocketry. Teachers continued through job-embedded professional development by teaching their units to student		

	volunteers during the summer.
Content Delivery:	Direct Instruction
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving • Reasoning & Proof • Technology
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physics • Chemistry • Life Science • Earth Science • Technology
Support Provided by Partners	<p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • Served as the Service Site • Provided Supplies, Materials or Meals • Provided Funding <p>Partner: Home Court Publishers</p> <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals • <i>Ben Bache</i>: Assisted in the Planning of the Training,

The Citadel

Training Type: Graduate Course

Number of Contact Hours: 60

Training Dates: 8/15/2013 - 8/1/2014

The Master of STEM Education program consists of thirty (30) credit hours, organized into two areas – core and specialty. The core area consists of eighteen (18) hours core coursework and twelve (12) hours of electives. Transfer credit into the program will be accepted in accordance with The Citadel Graduate College policy on transferring graduate credit.

Earth Science for Teachers

Number of Contact Hours: 60	Training Dates: 1/8/2014 - 5/8/2014
Course Description:	This graduate course is intended to be an introduction to Earth Science for teachers. It is a study of the materials and major processes of the earth including minerals and rocks, plate tectonics, hydrology, volcanoes, mountain building, oceanography and weather and climate. The geologic history of the earth and the fossil record will also be included. Emphasis will be on Earth-Space content for teaching in K-12 schools. This graduate blended format course includes independent content research.

Content Delivery:	Direct Instruction
Math Topics Covered	
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Earth Science • Technology
Support Provided by Partners	<p>Partner: Citadel</p> <ul style="list-style-type: none"> • Served as the Service Site • Provided Supplies, Materials or Meals <ul style="list-style-type: none"> • <i>Dr. Kathryn Richardson-Jones: Led Instruction/Training, Assisted in the Planning of the Training,</i>

Research and Statistics for STEM Applications

Number of Contact Hours: 60		Training Dates: 1/8/2014 - 5/8/2014	
Course Description:	<p>This course is for teachers in STEM education with no previous background in statistics who will need statistics in their further studies and their work. The focus is on understanding the use of research and statistical methods in various areas of science and engineering. Topics to be covered include research methods, measures of central tendency, correlation, statistical inference, and basic design of experiments with examples and application in science and engineering.</p>		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Probability & Statistics • Problem Solving • Reasoning & Proof • Technology • Other: Engineering 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science • Physics • Technology 		
Support Provided by Partners	<p>Partner: Citadel</p> <ul style="list-style-type: none"> • <i>Dr. Kathryn Richardson-Jones: Led Instruction/Training, Assisted in the Planning of the Training,</i> 		

[Approved Graduate Courses](#)

Training Type: Graduate Course

Number of Contact Hours: 60

Training Dates: 9/1/2013 - 8/31/2014

teachers continuing their graduate studies or enrolled in a Masters program can have their math or science course approved to meet their 60 hour professional development requirement.

Math 6561 G Learning & Teaching Math

Number of Contact Hours: 60		Training Dates: 6/1/2014 - 6/29/2014	
Course Description:	Teachers learn how to employ student-directed strategies and activities in the math classroom to help students learn mathematics conceptually.		
Content Delivery:	Total		
Math Topics Covered	<ul style="list-style-type: none">• Algebra• Geometry• Measurement• Probability & Statistics• Problem Solving		
Science Topics Covered			
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none">• Other		

AP Chemistry Certification

Number of Contact Hours: 60		Training Dates: 7/21/2014 - 7/25/2014	
Course Description:	Teachers learn how to teach high school students about the fundamental concepts of chemistry such as structure and states of matter, intermolecular forces, reactions, and how to use chemical calculations to solve problems at a college level.		
Content Delivery:	Direct Instruction		
Math Topics Covered			
Science Topics Covered	<ul style="list-style-type: none">• Chemistry		
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none">• Other		

Content Enrichment

Training Type: District Professional

Number of Contact

Training Dates: 9/1/2013 -

Development

Hours: 60

8/30/2014

These courses are designed to strengthen understanding of math and science content and standards.

Study Island

Number of Contact Hours: 30		Training Dates: 9/1/2013 - 8/31/2014	
Course Description:	Teachers complete lessons and assessments for specific grade level concepts and skills based upon pre-assessment results. Teachers complete a post-test at the end of 60 hours to measure growth in content knowledge.		
Content Delivery:	Total		
Math Topics Covered	<ul style="list-style-type: none">• Algebra• Geometry• Measurement• Probability & Statistics• Problem Solving• Reasoning & Proof		
Science Topics Covered	<ul style="list-style-type: none">• Scientific Inquiry• Physical Science• Physics• Chemistry• Life Science• Biology• Earth Science		
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none">• Served as the Service Site• Provided Supplies, Materials or Meals		

Study Island

Number of Contact Hours: 60		Training Dates: 9/1/2013 - 8/30/2014	
Course Description:	Teachers complete lessons and assessments for specific grade level concepts and skills based upon pre-assessment results. Teachers complete a post-test at the end of 60 hours to measure growth in content knowledge.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none">• Algebra• Geometry• Measurement• Probability & Statistics• Problem Solving		

	<ul style="list-style-type: none"> Reasoning & Proof Calculus
Science Topics Covered	<ul style="list-style-type: none"> Scientific Inquiry Physical Science Physics Chemistry Life Science Biology Earth Science
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> Served as the Service Site Provided Supplies, Materials or Meals <ul style="list-style-type: none"> <i>MT Phillips:</i> Other

[ETV/ ELearning SC](#)

Training Type: Summer Institute

Number of Contact Hours: 60

Training Dates: 9/1/2013 - 8/14/2014

Participants attend e-learning courses designed to support their instructional practices and increase their content knowledge.

Number of Contact Hours:		Training Dates: -
Course Description:		
Content Delivery:	Total	
Math Topics Covered		
Science Topics Covered		
Support Provided by Partners		

Building Problem Solving Skills in Grades K-4

Number of Contact Hours: 60		Training Dates: 1/13/2014 - 3/3/2014
Course Description:	Participants learn about and implement best practices in the classroom to encourage and strengthen students' problem solving skills in grades k-4.	
Content Delivery:	Direct Instruction	
Math Topics Covered	<ul style="list-style-type: none"> Problem Solving 	
Science Topics Covered		
Support Provided by Partners	Partner: Hampton District One	

	<ul style="list-style-type: none"> • Served as the Service Site
--	--

Mathematics: What's the Big Idea?

Number of Contact Hours: 60		Training Dates: 3/24/2014 - 5/19/2014	
Course Description:	Participants learn how to teach math ideas conceptually through relevant applications and hands-on inquiry. Teachers apply what they learn through elearning to teach their students. This job-embedded professional development includes instruction, observations, and coaching follow-up in the classroom.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Problem Solving 		
Science Topics Covered			
Support Provided by Partners			

iBloom

Number of Contact Hours: 60		Training Dates: 8/4/2014 - 8/14/2014	
Course Description:	Participants discover web tools and apps to use in the classroom to manage and produce multimedia projects for all grade levels embedding Blooms Taxonomy higher order thinking skills focusing on "Create." Content includes Flipping the Classroom and creating videos using iMovie to support math and science instruction. Final presentation involves each participant creating a presentation demonstrating how they will specifically use what they have learned in their math or science classroom.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving • Reasoning & Proof • Calculus • Technology 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science 		

	<ul style="list-style-type: none"> • Physics • Chemistry • Life Science • Biology • Earth Science • Technology
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Served as the Service Site • Other

Hampton District One Approved Professional Development Studies

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 9/1/2013 - 8/31/2014

Teachers wishing to complete math and science professional development requirements through an action research project applicable to their teaching assignment must have the study approved.

Project Lead The Way STEM

Number of Contact Hours: 60		Training Dates: 9/1/2013 - 7/31/2014	
Course Description:	Teachers learn STEM concepts and projects to implement in their courses. Teachers continue to implement best practices through job-embedded professional development and action research.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Problem Solving • Technology • Other: Engineering 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science • Physics • Technology • Other: Engineering 		
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Other 		

Math Mentoring

Number of Contact Hours: 60		Training Dates: 1/6/2014 - 5/8/2014	
Course Description:	Teacher worked with a student teacher analyzing standards, researching best practices, planning, developing activities, co-teaching, modeling, observing, reflecting, conferencing and coaching.		
Content Delivery:	Total		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving 		
Science Topics Covered			
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Served as the Service Site • Other 		

Master Teacher Support

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 9/1/2013 - 8/11/2013

Master Teachers meet monthly to receive technology, content, and best practices support. This year's PD included a focus on the Science Frameworks. Sessions also include time to assess the MSP project's process towards meeting goals, data analysis, reflection, and evidence-based decision making.

Content Delivery:	Reflection and Planning		
Math Topics Covered	<ul style="list-style-type: none"> • Problem Solving • Technology 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Technology 		
Support Provided by Partners	Partner: Invent Now, Inc <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals • Other Partner: S2TEM Centers South Carolina <ul style="list-style-type: none"> • Other • <i>Britt Magnuson:</i> Led Instruction/Training, Assisted in the Planning of the Training, • <i>Amy Threatt:</i> Led Instruction/Training, Assisted in the Planning of the Training, 		

	<p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • Served as the Service Site • Provided Supplies, Materials or Meals <p>Partner: Home Court Publishers</p> <ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • <i>MT Padgett:</i> Led Instruction/Training, Assisted in the Planning of the Training, <ul style="list-style-type: none"> • <i>Ben Bache:</i> Led Instruction/Training,
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S2TEM Math and Science Classroom Support

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 9/1/2013 - 5/15/2014

S2TEM Center provided teachers with classroom support through model teaching, analyzing student data, reading current research, and facilitating planning, reflection, and refinement.

Content Delivery:	Reflection and Planning	
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving • Technology 	
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Technology 	
Support Provided by Partners	<p>Partner: S2TEM Centers South Carolina</p> <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals <p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • Served as the Service Site 	<ul style="list-style-type: none"> • <i>Sue Phillips:</i> Led Instruction/Training, Assisted in the Planning of the Training, <ul style="list-style-type: none"> • <i>MT Salisbury:</i> Assisted in the Planning of the Training,

Invent Now Inquiry Learning

Training Type: Summer Institute

Number of Contact Hours: 60

Training Dates: 10/9/2013 - 7/3/2014

The Invent Now Professional development workshop for educators explores teaching methods that help to develop critical thinkers and creative problem solvers. This hands-on inquiry-based workshop will engage educators in an experience that will challenge participants to incorporate enhanced science, math, and creative problem solving skills to foster growth in student achievement.

Number of Contact Hours:	Training Dates: -
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Course Description:	
Content Delivery:	Total
Math Topics Covered	
Science Topics Covered	
Support Provided by Partners	
Number of Contact Hours:	Training Dates: -
Course Description:	
Content Delivery:	Total
Math Topics Covered	
Science Topics Covered	
Support Provided by Partners	

Inquiry Learning - Classroom Club Invention

Number of Contact Hours: 60		Training Dates: 1/17/2014 - 5/30/2014	
Course Description:	Participants attend 27 hours of direct instruction and hands-on activities learning about inquiry learning through Invent Now's problem-based modules. The remaining 33 hours are job-embedded hours where teachers teach modules to their classrooms students using the best practices they have learned to teach math, science, technology, and engineering standards. These hours also include time for post-conferences with the instructor and/or master teachers for reflection and evaluation.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Geometry • Measurement • Problem Solving • Reasoning & Proof • Technology 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physics • Life Science • Earth Science • Technology 		
Support Provided by Partners	Partner: Invent Now, Inc <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals 		

	<p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • Served as the Service Site • <i>MT Stansfield</i>: Led Instruction/Training, Assisted in the Planning of the Training,
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Inquiry Learning - Summer Institute Camp Invention

Number of Contact Hours: 60		Training Dates: 1/17/2014 - 7/3/2014	
Course Description:	Participants attend 27 hours of direct instruction and hands-on activities learning about inquiry learning through Invent Now's problem-based modules. The remaining 33 hours are job-embedded hours where teachers teach modules to students during summer math camps using the best practices they have learned to teach math, science, technology, and engineering standards. These hours also include time for post-conferences with the instructor and/or master teachers for reflection and evaluation.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Geometry • Measurement • Problem Solving • Reasoning & Proof • Technology 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physics • Chemistry • Earth Science • Technology 		
Support Provided by Partners	<p>Partner: Invent Now, Inc</p> <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals • Other <p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • <i>MT Stansfield</i>: Led Instruction/Training, Assisted in the Planning of the Training, 		

Math Camp

Number of Contact Hours: 60		Training Dates: 6/9/2014 - 7/25/2014	
Course Description:	Teacher did job embedded professional implementing inquiry and project-based best practices to conduct action research with struggling learners. These hours included planning with Master Teachers, analyzing student		

	data, reflection, coaching, and refinement.
Content Delivery:	Total
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving • Technology
Science Topics Covered	
Support Provided by Partners	<p>Partner: Invent Now, Inc</p> <ul style="list-style-type: none"> • <i>Britt Magnuson</i>: Led Instruction/Training, <p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • Served as the Service Site • Provided Supplies, Materials or Meals • <i>MT Taylor</i>: Assisted in the Planning of the Training,

Homecourt Publishers Project Based Learning

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 11/5/2013 - 5/29/2014

PBL is an extremely vital part of the 21st century classroom. Participants began by exploring the www.pblproject.com/ site for an in-depth understanding of project based scenarios. Participants then collaborated to develop cross-curricular project-based learning units to implement in their classrooms. They also learned how to integrate technology and use the Teacher Toolbox operating system and data base to make their units available online to other teachers for use in the classroom.

Cycle 1

Number of Contact Hours: 9		Training Dates: 11/5/2013 - 12/17/2013	
Course Description:	Participants collaborate to develop cross-curricular project-based learning units to implement in their classrooms. They also learn how to integrate technology and use the Teacher Toolbox operating system and data base to make their units available online to other teachers for use in the classroom.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving • Reasoning & Proof 		

	<ul style="list-style-type: none"> • Technology
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science • Life Science • Biology • Earth Science • Technology
Support Provided by Partners	<p>Partner: Hampton District One</p> <ul style="list-style-type: none"> • Served as the Service Site • Other <p>Partner: Home Court Publishers</p> <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals • Other • <i>Ben Bache:</i> Led Instruction/Training, Assisted in the Planning of the Training,

Cycle 2

Number of Contact Hours: 60		Training Dates: 2/11/2014 - 4/3/2014	
Course Description:	Participants collaborate to develop cross-curricular project-based learning units to implement in their classrooms. They also learn how to integrate technology and use the Teacher Toolbox operating system and data base to make their units available online to other teachers for use in the classroom.		
Content Delivery:	Direct Instruction		
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Probability & Statistics • Problem Solving • Reasoning & Proof • Technology 		
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science • Life Science • Biology • Earth Science • Technology 		
Support Provided by Partners	Partner: Hampton District One		

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 12/2/2013 - 3/11/2014

Cognitive CoachingSM is a supervisory/peer coaching model that capitalizes upon and enhances cognitive processes. Art Costa and Bob Garmston, the founders of Cognitive CoachingSM, define it as a set of strategies, a way of thinking, and a way of working that invites self and others to shape and reshape their thinking and problem solving capabilities.

Content Delivery:	Direct Instruction
Math Topics Covered	<ul style="list-style-type: none">• Other: Coaching Strategies
Science Topics Covered	<ul style="list-style-type: none">• Other: Coaching Strategies
Support Provided by Partners	<p>Partner: S2TEM Centers South Carolina</p> <ul style="list-style-type: none">• Provided Supplies, Materials or Meals• <i>Amy Threatt:</i> Led Instruction/Training, <p>Partner: Hampton District One</p> <ul style="list-style-type: none">• Served as the Service Site

S2TEM Geometry

Training Type: District Professional Development

Number of Contact Hours: 60

Training Dates: 3/4/2014 - 5/13/2014

This course will focus on the investigation of materials, pedagogy, and technology to teach Geometry and to refresh content knowledge in ways that conform to the National Council of Teachers of Mathematics (NCTM) standards.

Content Delivery:	Direct Instruction
Math Topics Covered	<ul style="list-style-type: none">• Geometry• Problem Solving• Reasoning & Proof• Technology
Science Topics Covered	
Support Provided by Partners	<p>Partner: S2TEM Centers South Carolina</p> <ul style="list-style-type: none">• Provided Supplies, Materials or Meals• <i>Amy Threatt:</i> Assisted in the Planning of the Training,

USC-Aiken Math/Science Courses

Training Type: Graduate Course

Number of Contact Hours: 60

Training Dates: 6/10/2014 - 7/11/2014

This course is to facilitate the participants' development of planning, instruction, and communication of mathematics and

science content.

Number of Contact Hours:	Training Dates: -
Course Description:	
Content Delivery:	Total
Math Topics Covered	
Science Topics Covered	
Support Provided by Partners	

Making Math and Science Fun for the Elementary School Student

Number of Contact Hours: 60	Training Dates: 6/10/2014 - 7/11/2014
Course Description:	The purpose of this standards-based course is to enhance K-6 teachers' content knowledge in science and math and to provide instructional and assessment strategies that make math and science fun and informative for their students.
Content Delivery:	Direct Instruction
Math Topics Covered	<ul style="list-style-type: none"> • Algebra • Geometry • Measurement • Problem Solving • Technology
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science • Life Science • Earth Science • Technology
Support Provided by Partners	<p>Partner: University of South Carolina Aiken</p> <ul style="list-style-type: none"> • Provided Supplies, Materials or Meals • <i>Dr. Gary Senn:</i> Led Instruction/Training, Assisted in the Planning of the Training,

Science Plus Institute

Training Type: Summer Institute

Number of Contact Hours: 60

Training Dates: 7/14/2014 - 8/30/2014

The Science P.L.U.S. Institute at Roper Mountain Science Center encourages hands-on active learning in science classrooms. The course brings teachers from throughout the state to the Center for an intensive one-week summer class. Participants are active learners, not passive listeners. The 30 hour Institute offers a variety of courses based on a particular subject for specific grades and models hands-on, inquiry-based teaching techniques. The remaining 30 hours are job-embedded in the classroom.

Earth Science Grade 8

Number of Contact Hours: 60		Training Dates: 7/14/2014 - 8/30/2014	
Course Description:	This earth science course for 8th grade teachers will focus on the Earth's Biologic History and Structure and Processes in the Earth System through the use of hands-on, inquiry-based investigations incorporating basic science process skills. Participants will identify, classify, and organize earth materials for use in leading classroom investigations based on the South Carolina Science Academic Standards.		
Content Delivery:	Direct Instruction		
Math Topics Covered			
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Earth Science 		
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Other 		

Life Science Grade 7

Number of Contact Hours: 60		Training Dates: 7/14/2014 - 8/30/2014	
Course Description:	Hands-on, inquiry-based activities emphasizing science process skills provide the vehicles for studying abiotic and biotic environment concepts that correlate to the 7th grade SC Science Academic Standards. Course topics will provide additional content to help develop a secure knowledge base for 7th grade teachers. Participants will observe and measure properties of the biotic and abiotic environments, how energy flows in ecosystems, and how change in population can affect the environment.		
Content Delivery:	Direct Instruction		
Math Topics Covered			
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Life Science 		
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Other 		

Physical Science Grades 4-6

Number of Contact Hours: 60		Training Dates: 7/14/2014 - 8/30/2014	
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Course Description:	Hands-on, inquiry-based activities emphasizing science process skills will provide the vehicles for studying concepts that correlate to the South Carolina Science Academic Standards for elementary physical science. Course topics provide additional content to help develop a secure knowledge base for middle school physical science teachers.
Content Delivery:	Direct Instruction
Math Topics Covered	
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Other

Clemson Extension Service

Training Type: District Professional Development

Number of Contact Hours: 6

Training Dates: 8/8/2014 - 8/8/2014

Teachers take home information to use in their classrooms within the 6 branches of Science on the Move (Geospatial, Energy, Plant & Animal Science, Robotics & Engineering, Environmental Science, and Health Science). Matched to SC Science Academic Standards.

Content Delivery:	Mini-Course
Math Topics Covered	
Science Topics Covered	<ul style="list-style-type: none"> • Scientific Inquiry • Physical Science • Physics • Life Science • Biology • Earth Science • Technology • Other: Robotics and Engineering
Support Provided by Partners	Partner: Hampton District One <ul style="list-style-type: none"> • Provided Funding